PB90-195769

Risk Assessments Appendixes Environmental Impact Statement NESHAPS (National Emission Standards for Hazardous Air Pollutants) for Radionuclides. Background Information Document Volume 2. Appendixes

(U.S.) Office of Radiation Programs, Washington, DC

Sep 89

U.S. Department of Commerce
National Technical Information Service
NTIS

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This document is the Appendix to Risk Assessments Vol II and it contains the inputs to all the computer runs used to generate the risk assessment.

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(b) IDENTIFIERS AND OPEN-ENDED TERMS - Use identifiers for project names, code names, equipment designators, etc. Use open-ended terms written in descriptor form for those subjects for which no descriptor exists.

(c) COSATI FIELD GROUP - Field and group assignments are to be taken from the 1965 COSATI Subject Category List. Since the majority of documents are multidisciplinary in nature, the Primary Field/Group assignment(s) will be specific discipline, area of human endeavor, or type of physical object. The application(s) will be cross-referenced with secondary Field/Group assignments that will follow the primary posting(s).

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Office of Radiation Programs
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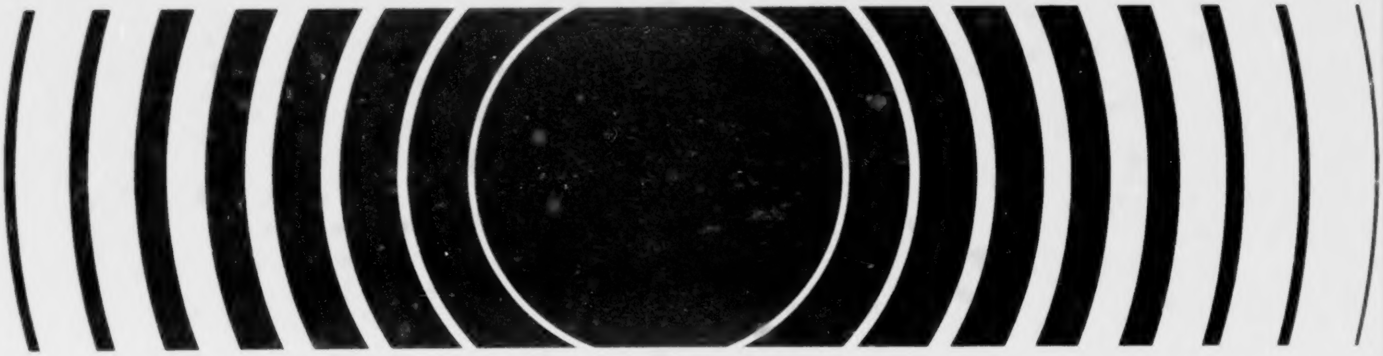
Risk Assessments Appendixes

Environmental Impact Statement

NESHAPS for Radionuclides

Background Information Document — Volume 2 Appendixes



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Risk Assessments

Environmental Impact Statement for NESHAPS Radionuclides

VOLUME 2 - Appendixes

BACKGROUND INFORMATION DOCUMENT

September 1989
U.S. Environmental Protection Agency
Office of Radiation Programs
Washington, D.C. 20460

Preface

The Environmental Protection Agency is promulgating National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Radionuclides. An Environmental Impact Statement (EIS) has been prepared in support of the rulemaking. The EIS consists of the following three volumes:

VOLUME I - Risk Assessment Methodology

This document contains chapters on hazard identification, movement of radionuclides through environmental pathways, radiation dosimetry, estimating the risk of health effects resulting from expose to low levels of ionizing radiation, and a summary of the uncertainties in calculations of dose and risks.

VOLUME II - Risk Assessments

This document contains a chapter on each radionuclide source category studied. The chapters include an introduction, category description, process description, control technology, health impact assessment, supplemental control technology, and cost. It has an appendix which contains the inputs to all the computer runs used to generate the risk assessment.

VOLUME III - Economic Assessment

This document has chapters on each radionuclide source category studied. Each chapter includes an introduction, industry profile, summary of emissions, risk levels, the benefits and costs of emission controls, and economic impact evaluations.

Copies of the EIS in whole or in part are available to all interested persons; an announcement of the availability appears in the Federal Register. For additional information, contact James Hardin at (202) 475-9610 or write to:

Director, Criteria and Standards Division
Office of Radiation Programs (ANR-460)
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

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CAP-88 INPUT SHEETS

The site specific input parameters supplied to the CAP-88 assessment codes for each facility evaluated in this assessment are presented in this appendix. Where no values are shown on a particular input sheet, it means that either the parameter does not apply or that the default values (see Volume I) were used.

Several changes have been made since the data was presented in the Draft Background Information Document. In some instances, demographic data has been updated. Meteorological day/night data sets, which had previously been incorrectly used, have now been fixed. Agricultural array data is now developed using state specific data. Additional changes have been made to source terms in response to comments. All changes have been indicated on the comment line at the bottom of each data sheet.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2
Facility: Idaho National Engineering Lab. Location: Idaho Falls, ID

X Population Run JCL File Name: ALLIDP
____ Array Attached Pop. File Name: IDAHO
Latitude: 43 ° 34 ' 45 " Longitude: 112 ° 56 ' 47 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: PIH0359
Location: WBAN: 24156 HDR: 0359 CODE: PIH SET#: STAR03

Temperature: 8 °C Lid Height: 615 m Rainfall: 27 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

____ Area Source:
Circular Area (m^2):

Plume Rise:
__ Buoyant (cal/s):
X Momentum (m/s): 0
__ Entered (m):
Pasquill Stability A B C D E F G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Idaho National Engineering Lab. Location: Idaho Falls, ID

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			1.78E+3					
Ba-139			7.52E+0					
Co-60			6.48E-5					
Cs-134			1.0E-4					
Cs-137			2.39E-3					
Cs-138			9.35E-1					
Gd-153			9.75E-6					
H-3			3.32E+1					
Hg-203			1.4E-4					
I-129			1.76E-1					
I-131			5E-4					
Kr-85			1.08E+4					
Kr-85m			3.84E+1					
Kr-87			1.39E+2					
Kr-88			1.39E+2					
Mn-54			6.88E-7					
Nb-95			5.23E-7					
Pu-238			1.56E-5					
Ru-103			2.02E-7					
Sb-125			9.31E-1					
Se-75			1.05E-4					
Sr-85			3.21E-8					
Sr-90			1.9E-6					
Te-132			6E-8					
Xe-133			1.75E+1					
Xe-135			1.24E+2					
Xe-138			4.08E+2					
Y-90			3.05E-8					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2

Facility: Oak Ridge National Laboratory Location: Oak Ridge, TN

X Population Run JCL File Name: AGOAK86P
______ Array Attached Pop. File Name: DOEGENRC
Latitude: 36 ° 02 ' 00 " Longitude: 84 ° 07 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

______ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: TYS1328
Location: ______ WBAN: 13891 HDR: 1328 CODE: TYS SET#: STAR06

Temperature: 14 °C Lid Height: 730 m Rainfall: 134 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	20					
Diameter (m):						
______ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					

	A	B	C	D	E	F	G
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Oak Ridge National Laboratory Location: Oak Ridge, TN

Additional Source Term

Source:			1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
C-14			1E-4					
Cu-64			2E-6					
Ga-67			3E-6					
H-3			3.12E+4					
I-125			1.5E-5					
I-131			3.55E-2					
Kr-85			1.06E+4					
Pa-234m			3.71E-4					
Tc-99			1.34E-1					
Tc-99m			3E-6					
Th-234			3.71E-4					
Tl-201			5E-6					
U-234	Y		7.7E-2					
U-234	W		7.7E-2					
U-235			6.37E-3					
U-236			8.04E-6					
U-238			2.77E-2					
Xe-133			5.16E+4					
Y-90			2E-5					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: DOE Facilities   Page 1 of 2

Facility: Los Alamos Scientific Laboratory   Location: Los Alamos, NM

X Population Run   JCL File Name: LOSALAMP
___ Array Attached   Pop. File Name: LOSALAMO
Latitude: 35 ° 52 ' 10 "   Longitude: 106 ° 15 ' 44 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:				X	

___ Individual Run   JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: SAF1184
Location: ______   WBAN: 23049   HDR: 1184   CODE: SAF   SET#: STAR06

Temperature: 12 °C   Lid Height: 800 m   Rainfall: 29 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	30.5					
Diameter (m):						
___ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					
___ Entered (m):						

Pasquill Stability   A ___ B ___ C ___ D ___ E ___ F ___ G ___

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Los Alamos Scientific Laboratory Location: Los Alamos, NM

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			7.27E+2					
C-11			1.83E+4					
H-3			1.07E+4					
I-131			3.8E-5					
N-13			4.83E+3					
O-14			2.58E+3					
O-15			8.55E+4					
P-32			6.99E-5					
Pu-238			9.88E-5					
Pu-239			1.09E-4					
Sr-90			2.57E-3					
U-235			7.05E-4					
U-238			1.39E-4					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1
Facility: RMI Company Location: Ashtabula, OH

X Population Run JCL File Name: RMICOMPP
___ Array Attached Pop. File Name: RMICOMPY
Latitude: 41 ° 53 ' 24 " Longitude: 80 ° 46 ' 36 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: ___
Location: ___ WBAN: 14860 HDR: 610 CODE: EIR SET#: STAR02

Temperature: 10 °C Lid Height: 800 m Rainfall: 89 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15.24	15.24	15.24	15.24	7.62	10.06
Diameter (m):	0.41	0.46	0.58	0.36	0.25	0.30
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	13.5	9.25	19.54	3.79	7.94	15.04

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234			2.38E-4	3.21E-4	3.18E-9	9.60E-13	0.00E+0	2.69E-8
U-235			1.73E-6	2.33E-6	7.94E-7	2.40E-9	5.48E-6	3.40E-5
U-236								1.79E-6
U-238			2.38E-4	3.21E-4	3.96E-4	1.20E-7	7.56E-4	3.55E-3

___ Additional Source Term Attached
Comments: Nearest individual 305 m ENE; changes in source term and met data.
Personal communication with R. Mason of RMI.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Portsmouth Gaseous Diffusion Plant Location: Piketon, OH

X Population Run JCL File Name: PORTSMOP
Array Attached Pop. File Name: PORTSMOU
Latitude: 39 ° 02 ' 00 " Longitude: 83 ° 00 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: HTS0019
Location: WBAN: 3860 HDR: 0019 CODE: HTS SET#: STAR01

Temperature: 12 °C Lid Height: 750 m Rainfall: 98 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	23					
Diameter (m):						

Area Source:
Circular Area (m^2):

Plume Rise:
Buoyant (cal/s):
X Momentum (m/s): 6
Entered (m):
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Pa-234m			1.41E-2					
Tc-99			1.22E-1					
Th-234			1.41E-2					
U-234			2.31E-2					
U-235			1.23E-3					
U-236			3.44E-5					
U-238			1.41E-2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2

Facility: Hanford Reservation Location: Hanford, WA

X Population Run JCL File Name: HANFORDP
____ Array Attached Pop. File Name: HANFORD
Latitude: 46 ° 26 ' 00 " Longitude: 119 ° 35 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: MWH0486
Location: ____ WBAN: 24110 HDR: 0486 CODE: MWH SET#: STAR03

Temperature: 10 °C Lid Height: 600 m Rainfall: 20 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	61					
Diameter (m):						
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached
Comments: Stack height changed per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Hanford Reservation Location: Hanford, WA

Additional Source Term

Source:			1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Am-241			5.25E-4					
Ar-41			1.28E+5					
Ce-144			2.64E-3					
Co-60			1.08E-2					
Cs-137			8E-3					
Cs-138			1.86E+3					
H-3			8.7E+1					
I-129			5.26E-1					
I-131			5.59E-1					
I-132			2.6E-1					
I-133			2.33E+0					
I-135			3.5E-1					
Kr-85			5.25E+5					
Kr-85m			3.29E+2					
Kr-87			8.54E+2					
Kr-88			3.56E+2					
La-140			3.36E-2					
Mo-99			9.61E-2					
Nb-95			3.52E-3					
Pb-212			1.75E-1					
Pm-147			1.23E-2					
Pu-238			8.92E-2					
Pu-239			3.15E-3					
Pu-241			1.4E-2					
Rb-88			3.56E+2					
Ru-106			4.52E-1					
Sn-113			1.8E-1					
Sr-90			1.19E-3					
Tc-99			2E-4					
U-234			6.77E-5					
U-235			8.38E-6					
U-236			5.4E-7					
U-238			4.18E-5					
Xe-133			6.69E+1					
Xe-135			1.26E+3					
Zr-95			4.02E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2

Facility: Savannah River Plant Location: 25 km S of Aiken, SC

X Population Run JCL File Name: SAVRIVPP

___ Array Attached Pop. File Name: SAVRIVPL

Latitude: 33 ° 17 ' 20 " Longitude: 81 ° 40 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: HESP1018

Location: ___ WBAN: 3820 HDR: 1018 CODE: AGS SET#: STAR05

Temperature: 18 °C Lid Height: 600 m Rainfall: 108 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	60	61	10	10		50
Diameter (m):						
___ Area Source: Circular Area (m²):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0	0	0	0		0

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Savannah River Plant Location: 25 km S of Aiken, SC

Additional Source Term

Source:			1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Am-241			4.5E-6	1.81E-4	9.45E-6			
Ar-41			8.32E+4					
C-14			3.1E+1	2.5E+1				
Ce-141				1.9E-5				
Ce-144				1.08E-2				
Cm-244				2.8E-5				
Co-60				8E-6				
Cs-134				6.94E-4				
Cs-137				2.95E-3				
H-3			1.29E+5	2.92E+5		1.14E+3		
I-129			4.7E-4	8.7E-2				1.3E-5
I-131			1.6E-2	7.77E-3				2.47E-3
Kr-85				7.1E+5				
Kr-85m			2.03E+3					
Kr-87			1.38E+3					
Kr-88			2.43E+3					
Nb-95				9.17E-3				
Os-185				1.4E-4				
Pu-238				2.02E-3				
Pu-239			4.5E-6	2.79E-4	9.45E-6			
Ru-103				3.5E-3				
Ru-106				5.9E-2				
Se-75				2.1E-5				
Sr-89				9.2E-4				
Sr-90			4.7E-4	9.2E-4				1.3E-5
U-234				1.47E-3	9.78E-5			
U-238				1.47E-3	9.78E-5			
Xe-131m				3E-1				
Xe-133			1.06E+4					
Xe-135			2.6E+3					
Zr-95				4.37E-3				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2

Facility: Brookhaven National Laboratory Location: Upton, NY

X Population Run JCL File Name: BROOKP

Array Attached Pop. File Name: BROOKNLB

Latitude: 40 ° 52 ' 15 " Longitude: 72 ° 52 ' 30 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: LEA0435
Location: WBAN: 94789 HDR: 435 CODE: LEA SET#: STAR04

Temperature: 10 °C Lid Height: 900 m Rainfall: 105 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	17	18	98	10	14	18
Diameter (m):						
Area Source: Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):							
X Momentum (m/s):	0	0	0	0	0	0	
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989

Source Category: DOE Facilities

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Facility: Brookhaven National Laboratory

Location: Upton, NY

Additional Source Term

	Source:		1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41							1.2E+3	
Ba-133					2.7E-6			
Be-7								1.8E-6
Br-82					7.8E-3			
C-14						7.7E-4		
Co-57					1.4E-6	2.1E-5		
Cr-51						1.1E-4		
Fe-55						5.1E-3		
H-3			1.3E+0	6.6E+0	1.4E+2	9.4E-2	1.3E+1	7.3E-5
Hg-206								1.2E-6
I-125						5.2E-4		
I-126					2E-4			1.2E-4
I-131					4.9E-4	2.1E-5		1.2E-6
I-133					1.8E-4			
Mn-54						1E-5		1E-7
O-15								1.2E+2
P-32								
Ru-103						1.2E-5		
S-35						5.7E-4		
Sb-122								3E-7
Se-75					1.8E-5			2.1E-6
Sn-113						2E-4		
Sn-117m						4.2E-5		
Tc-99						1E-4		
Tc-99m						2E-4		
Tl-201						2.1E-5		
Xe-125								8.8E-5
Xe-127					2.8E-4			2.9E-4
Xe-131m					2.2E-6			4.6E-6
Zn-65								1.3E-6

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989

Source Category: DOE Facilities

Page 1 of 1

Facility: Feed Materials Production Center

Location: Fernald, OH

X Population Run JCL File Name: NATLDOHP

Array Attached Pop. File Name: FMPCRN

Latitude: 39 ° 18 ' 00 "

Longitude: 84 ° 41 ' 17 "

Distances (meters): 1,600 3,200 4,800 6,400 8,000 16,000 32,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:				X	
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CVE0403

Location:

WBAN: 93814 HDR: 0403 CODE: CVE SET#: STAR04

Temperature: 13 °C Lid Height: 700 m Rainfall: 102 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	10					
Diameter (m):						
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

	A	B	C	D	E	F	G
Entered (m): Pasquill Stability							

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234			1.99E-2					
U-238			1.99E-2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Lawrence Berkeley Laboratory Location: Berkeley, CA

X Population Run JCL File Name: HILLUCP

___ Array Attached Pop. File Name: UFCBERKL

Latitude: 37 ° 52 ' 36 " Longitude: 122 ° 15 ' 01 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: OAK0319

Location: ___ WBAN: 23230 HDR: 0319 CODE: OAK SET#: STAR03

Temperature: 13 °C Lid Height: 615 m Rainfall: 140 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
___ Area Source: Circular Area (m^2):						
Plume Rise:						
__ Buoyant (cal/s):						
X Momentum (m/s):	0					

__ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
C-14			2.32E-3					
H-3			7.62E+1					
I-125			3.67E-3					
I-131			1.16E-3					
Pu-239			7.37E-9					
Sr-90			3.62E-3					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Argonne National Laboratory Location: Woodbridge, IL

X Population Run JCL File Name: ARGONNEP
_____ Array Attached Pop. File Name: ARGONNE
Latitude: 41 ° 43 ' 00 " Longitude: 87 ° 58 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

_____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: _____ Array Attached STAR File Name: MDW0675
Location: _____ WBAN: 14819 HDR: 0675 CODE: MDW SET#: STAR02

Temperature: 10 °C Lid Height: 700 m Rainfall: 88 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	61					
Diameter (m):						

_____ Area Source:						
Circular Area (m^2):						

Plume Rise:							
___ Buoyant (cal/s):							
X Momentum (m/s):	0						
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989

Source Category: DOE Facilities

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Facility: Argonne National Laboratory

Location: Woodbridge, IL

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			1.46E+0					
C-11			9E+1					
Cs-134			2.04E-7					
Cs-137			4.95E-7					
H-3			5.03E+1					
I-129			1.61E-5					
I-131			1.52E-6					
Nr-85			1.7E+0					
Nb-95			1.55E-8					
Pu-239			5.61E-9					
Rn-220			6.98E+3					
Sb-125			3.38E-5					
Zr-95			7.5E-9					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Mound Facility Location: Miamisburg, OH

X Population Run JCL File Name: MOUNDFCP
______ Array Attached Pop. File Name: MOUNDFC
Latitude: 39 ° 37 ' 51 " Longitude: 84 ° 17 ' 17 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: DAY1502
Location: ______ WBAN: 93815 HDR: 1502 CODE: DAY SET#: STAR04

Temperature: 11 °C Lid Height: 700 m Rainfall: 87 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	61					
Diameter (m):						
______ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					
___ Entered (m):						

	A	B	C	D	E	F	G
Pasquill Stability							

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3			3.56E+3					
Pu-238			5.83E-6					
Pu-239			1.35E-7					
U-234			7.5E-8					
U-238			8.37E-8					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Pantex Plant Location: 27 km NE of Amarillo, TX

X Population Run JCL File Name: PANTEXP

____ Array Attached Pop. File Name: PANTEXPL

Latitude: 35 ° 20 ' 27 " Longitude: 101 ° 33 ' 50 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: AMA0621

Location: ____ WBAN: 23047 HDR: 621 CODE: AMA SET#: STAR03

Temperature: 20 °C Lid Height: 328 m Rainfall: 56 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3			1.3E-1					
U-238			1E-5					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Ames Laboratory Location: Ames, Iowa

X Population Run JCL File Name: AMESP
Array Attached Pop. File Name: AMES
Latitude: 42 ° 00 ' 00 " Longitude: 93 ° 36 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: AL00729
Location: WBAN: 94910 HDR: 729 CODE: ALO SET#:

Temperature: 10 °C Lid Height: 570 m Rainfall: 78 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	30.5					
Diameter (m):						
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3			7.6E-2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Fermilab Location: Batavia, IL

X Population Run JCL File Name: FERMILAP

___ Array Attached Pop. File Name: FERMILAB

Latitude: 41 ° 51 ' 00 " Longitude: 88 ° 15 ' 15 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: ORD0452

Location: ___ WBAN: 94846 HDR: 0452 CODE: ORD SET#: ___

Temperature: 8 °C Lid Height: 600 m Rainfall: 57 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
C-11			3.4E+0					
H-3			3E-3					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Rockwell, Rocketdyne Division Location: Rockwell International

X Population Run JCL File Name: ROCKWELP
___ Array Attached Pop. File Name: ROCKWELL
Latitude: 34 ° 13 ' 50 " Longitude: 118 ° 42 ' 47 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: BUR1051
Location: Burbank, CA WBAN: 23152 HDR: 1051 CODE: BUR SET#: STAR05

Temperature: 18 °C Lid Height: 900 m Rainfall: 29 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	30					
Diameter (m):						
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	0					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Sr-90			1.31E-5					

___ Additional Source Term Attached
Comments: STAR file changed to Burbank, CA; change in tempurature, lid height, latitude and longitude. Max. individual at 250 m ENE. Per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Knolls Atomic Power Laboratory Location: Windsor, CT

X Population Run JCL File Name: KNLWNDP
Array Attached Pop. File Name: KPLWDSR
Latitude: 41 ° 52 ' 30 " Longitude: 72 ° 41 ' 15 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: BDL1262
Location: WBAN: 14740 HDR: 1262 CODE: BDL SET#: STAR06

Temperature: 20 °C Lid Height: 1000 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Knolls Atomic Power Laboratory Location: Windsor, CT

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			7.81E-2					
C-14			4.67E-2					
Co-60			2.62E-7					
H-3			1.1E-2					
Kr-83m			5.12E-5					
Kr-85			2.32E-7					
Kr-85m			1.89E-4					
Kr-87			1.4E-4					
Kr-88			3.61E-4					
Xe-131m			1.02E-5					
Xe-133			1.93E-3					
Xe-133m			6.55E-5					
Xe-135			1.77E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 2

Facility: Knolls Atomic Power Laboratory Location: Kesselring, NY

X Population Run JCL File Name: KESSELRP

Array Attached Pop. File Name: KPLKSLRG

Latitude: 43 ½ 01 ' 30 " Longitude: 73 ½ 54 ' 50 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: ALB0523

Location: Albany, NY WBAN: 14735 HDR: 0523 CODE: ALB SET#: STAR06

Temperature: 8.7 ½C Lid Height: 930 m Rainfall: 85 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989

Source Category: DOE Facilities

Page 2 of 2

Facility: Knolls Atomic Power Laboratory

Location: Kesselring, NY

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			1.55E-1					
C-14			3.42E-1					
Co-60			3.43E-6					
H-3			8E-2					
Kr-83m			7.01E-4					
Kr-85			1.98E-6					
Kr-85m			2.02E-3					
Kr-87			1.93E-3					
Kr-88			3.99E-3					
Xe-131m			9.2E-4					
Xe-133			2.17E-2					
Xe-135			2.3E-2					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Battelle Columbus Laboratory Location: near Columbus, OH

X Population Run JCL File Name: BATTELLP

Array Attached Pop. File Name: BATTELLE

Latitude: 39 ½ 58 ' 02 " Longitude: 83 ½ 15 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CMH0243

Location: Columbus, OH WBAN: 14821 HDR: 0243 CODE: CMH SET#: STAR05

Temperature: 12 ½C Lid Height: 930 m Rainfall: 107 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	24					
Diameter (m):						
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Battelle Columbus Laboratory Location: near Columbus, OH

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ac-228			1.01E-5					
Be-7			1.19E-5					
Bi-214			2.43E-5					
Co-57			1.44E-6					
Co-60			3.7E-6					
Cs-134			1.45E-6					
Cs-137			3.03E-6					
I-131			8.7E-7					
K-40			3E-4					
Kr-85			7.64E+0					
Pb-212			3.02E-6					
Pb-214			1.52E-5					
Pu-239			3.99E-7					
Sb-125			5.05E-6					
Sr-90			5.76E-7					
Tl-208			2.55E-6					
U-235			2.61E-6					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Knolls Atomic Power Laboratory Location: Knolls, NY

X Population Run JCL File Name: KNOLLSP
Array Attached Pop. File Name: KPLKNOLL
Latitude: 42 ½ 49 ' 23 " Longitude: 73 ½ 52 ' 06 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food.Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: ALB0523
Location: Albany, NY WBAN: 14735 HDR: 0523 CODE: ALB SET#: STAR06

Temperature: 8.7½C Lid Height: 930 m Rainfall: 85 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	10					
Diameter (m):						
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

	A	B	C	D	E	F	G
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Knolls Atomic Power Laboratory Location: Knolls, NY

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Co-60			1.04E-6					
I-131			3.72E-6					
Kr-85			7.94E-1					
Kr-85m			4.06E-3					
Kr-87			5.82E-3					
Kr-88			1.23E-2					
Pu-238			1.3E-7					
Pu-239			1.59E-8					
Sb-125			2.78E-5					
Sn-113			1.28E-6					
Sr-90			2.48E-5					
U-234			3.33E-6					
U-235			1E-7					
U-236			6.6E-9					
U-238			9.13E-10					
Xe-131m			5.67E-7					
Xe-133			1.38E-3					
Xe-135			1.34E-2					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Nevada Test Site Location: Nye County, NV

X Population Run JCL File Name: ALLNVFCP
Array Attached Pop. File Name: NEVTSTST
Latitude: 37 ½ 06 ' 00 " Longitude: 116 ½ 12 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: UCC1026
Location: Yucca Flats, NV WBAN: 03133 HDR: 1026 CODE: UCC SET#: STAR05

Temperature: 19 ½C Lid Height: 500 m Rainfall: 10 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

Area Source:

Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):						
X Momentum (m/s):	0					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3			1.21E+2					
I-131			2.4E+0					
I-133			9.6E-6					
Kr-85			4.3E+0					
Xe-133			3.6E+4					
Xe-133m			5.78E-2					
Xe-135			4.11E-2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Paducah Gaseous Diffusion Plant Location: near Paducah, KY

X Population Run JCL File Name: PADUCAHP

Array Attached Pop. File Name: PADUCAH

Latitude: 37 ½ 08 ' 00 " Longitude: 88 ½ 49 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: PAH0479

Location: WBAN: 03816 HDR: 0479 CODE: PAH SET#: STAR01

Temperature: 15 ½C Lid Height: 660 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Tc-99			8.75E-3					
U-234			1.79E-4					
U-238			1.79E-4					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989　Source Category: DOE Facilities　Page 1 of 2

Facility: Rocky Flats Plant　Location: 27km NW of Denver, CO

X Population Run　JCL File Name: RCKYFLTP

___ Array Attached　Pop. File Name: ROCKYFLT

Latitude: 39 ½ 53 ' 40 "　Longitude: 105 ½ 11 ' 45 "

Distances (meters): 500　1,000　2,000　3,000　4,000　5,000　10,000　20,000　30,000　40,000　50,000　60,000　80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run　JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached　STAR File Name: DEN0618

Location: Denver, CO　WBAN: 23062　HDR: 0618　CODE: DEN　SET#: STAR03

Temperature: 10 ½C　Lid Height: 510 m　Rainfall: 40 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	46					
Diameter (m):						
___ Area Source: Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):

X Momentum (m/s): 0

___ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Rocky Flats Plant Location: 27 km NW of Denver, CO

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Am-241			4.8E-6					
H-3			2.17E-1					
Pu-233			1.67E-8					
Pu-234			1.67E-8					
Pu-238			9.75E-7					
Pu-239			1.46E-5					
U-233			4.32E-6					
U-234			4.32E-6					
U-238			1.68E-5					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Pinellas Plant Location: Pinellas County, FL

X Population Run JCL File Name: PINELASP
Array Attached Pop. File Name: PINNELAS
Latitude: 27 ° 52 ' 30 " Longitude: 82 ° 45 ' 15 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: TPA0662
Location: WBAN: 12842 HDR: 0662 CODE: TPA SET#: STAR01

Temperature: 22 °C Lid Height: 900 m Rainfall: 125 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	21	31	6.4			
Diameter (m):						
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0	0	0			

Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD	1	2	3	4	5	6
H-3			1.33E+2	5.95E+1	6.8E-1			
Kr-85			4.58E+0					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Bettis Atomic Power Laboratory Location: 13 km SW of Pittsburg, PA

X Population Run JCL File Name: BETSAPLP

Array Attached Pop. File Name: BETTSAPL

Latitude: 40 ½ 21 ' 38 " Longitude: 79 ½ 53 ' 47 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: PIT1440

Location: Pittsburg, PA WBAN: 94823 HDR: 1440 CODE: PIT SET#: STAR04

Temperature: 10 ½C Lid Height: 760 m Rainfall: 92 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						

Area Source:

Circular Area (m^2):

Plume Rise:

Buoyant (cal/s):							
X Momentum (m/s):	0						
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 2 of 2

Facility: Bettis Atomic Power Laboratory Location: 13 km SW of Pittsburg, PA

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Co-60			1.73E-6					
Cs-137			1.73E-6					
I-129			1.76E-6					
I-131			6.98E-6					
Kr-85			9.4E-1					
Rn-220			6.26E-2					
Sb-125			3.19E-5					
Sr-90			1.73E-6					
U-234			6E-7					
U-238			6E-7					
Xe-131m			1.47E-4					
Xe-133			3.8E-7					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Sandia / Lawrence Livermore Location: 65 km East of San Francisco, CA

X Population Run JCL File Name: SANDALVP
___ Array Attached Pop. File Name: SANDLV
Latitude: 37 ½ 40 ' 27 " Longitude: 121 ½ 42 ' 18 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SUU0316
Location: Travis, CA WBAN: 23202 HDR: 0316 CODE: SUU SET#: STAR03

Temperature: 15 ½C Lid Height: 615 m Rainfall: 42 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	30					
Diameter (m):						

___ Area Source:						
Circular Area (m^2):						

Plume Rise:							
___ Buoyant (cal/s):							
X Momentum (m/s):	0						
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3			2.01E+3					
N-13			9.00E+1					
O-15			9.00E+1					
Pu-239			7.00E-9					
Sr-90			1.30E-7					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: DOE Facilities Page 1 of 1

Facility: Lovelace ITRI/Sandia Albuquerque Location: 10km South of Albuquerque, NM

X Population Run JCL File Name: LOVELCP

Array Attached Pop. File Name: LOVELACE

Latitude: 34 ½ 59 ' 30 " Longitude: 106 ½ 32 ' 15 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: ABQ0282

Location: WBAN: 23050 HDR: 0282 CODE: ABQ SET#: STAR03

Temperature: 14 ½C Lid Height: 800 m Rainfall: 20 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
Area Source: Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):							
X Momentum (m/s):	0						
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41			5.49E+0					
H-3			1.34E-1					
Pb-212			8.5E-3					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Private Laboratory Location: Rockville, MD

X Population Run JCL File Name: NRCLIC(SAICP)

____ Array Attached Pop. File Name: ____

Latitude: 39 ° 05 ' 0 " Longitude: 77 ° 11 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(DCA1317)

Location: Washington, DC WBAN: 13743 HDR: 1317 CODE: DCA SET#: ____

Temperature: ____ °C Lid Height: 790 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):	0.3					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	8					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
I-131	D		8.12E-3					
Co-60	W		2.14E-4					
Cs-137	D		1.49E-4					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Reference Sealed Source Location: Burlington, MA

x Population Run JCL File Name: NRCLIC(REFSEALP)
_____ Array Attached Pop. File Name: _____
Latitude: 42 ° 30 ' 0 " Longitude: 71 ° 45 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

_____ Individual Run JCL File Name: _____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: _____ Array Attached STAR File Name: STARLIB(BOS1072)
Location: Boston, MA WBAN: 14739 HDR: 1072 CODE: BOS SET#: _____

Temperature: _____ °C Lid Height: _____ m Rainfall: _____ cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	6					
Diameter (m):	0.3					
_____ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	1					
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Co-60	Y		3.2E-7					
Kr-85	*		2.37E-1					
Ir-192	W		3.34E-6					
Am-241	W		1.39E-7					
Cf-252	Y		2.98E-9					

_____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Tritium Lighting Manufacturer Location: Elmsford, NY

X Population Run JCL File Name: NRCLIC(SELPOWP)

______ Array Attached Pop. File Name: ______

Latitude: 41 ° 02 ' 0 " Longitude: 73 ° 47 ' 0 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(HPN0429)

Location: White Plains, NY WBAN: 94745 HDR: 429 CODE: HPN SET#: ______

Temperature: ______ °C Lid Height: 700 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):	1					

______ Area Source: Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
X Momentum (m/s):	7.6						
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		1522					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Maximum Hospital Location: Boston, MA

X Population Run JCL File Name: NRCLIC(MAXHOSPP)

Array Attached Pop. File Name:

Latitude: 42 ° 21 ' 0 " Longitude: 71 ° 6 ' 0 "

Distances:	200	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	80,000						

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BOS0211)

Location: Boston, MA WBAN: 14739 HDR: 211 CODE: BOS SET#:

Temperature: °C Lid Height: 615 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	1					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
I-125	D		3.9E-2					
Xe-133	*		3.14E+1					
I-131	D	1	2.4E-2					

Additional Source Term Attached

Comments: Stack height = 1 m to approximate building wake effect;
I-131 added per Science Advisory Board recommendation.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Urban Hospital Location: Boston, MA

X Population Run JCL File Name: NRCLIC(URBHOSPP)
____ Array Attached Pop. File Name: ____
Latitude: 42 ° 21 ' 0 " Longitude: 71 ° 06 ' 0 "

Distances: 300 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000
(meters) 40,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____
(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(BOS0211)
Location: Boston, MA WBAN: 14739 HDR: 211 CODE: BOS SET#: STAR02

Temperature: ____ °C Lid Height: 615 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	1					
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Xe-133	*		1					
I-125	D		1E-2					
I-131	D		1E-2					

____ Additional Source Term Attached
Comments: Stack height = 1 meter to approximate building wake effect; Pop. file corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Rural Hospital Location: Columbia, MO

X Population Run JCL File Name: NRCLIC(HOSPTLP)

Array Attached Pop. File Name:

Latitude: 38 ° 57 ' 00 " Longitude: 92 ° 19 ' 00 "

Distances:	300	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	80,000						

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(COU0170)

Location: WBAN: 13983 HDR: 170 CODE: COU SET#: STAR02

Temperature: °C Lid Height: 875 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1					
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	1					

Entered (m):

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Xe-133	*		1					
I-125	D		1E-2					
I-131	D		1E-2					

Additional Source Term Attached

Comments: Stack height = 1 meter to approximate building wake effect.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: NRC   Page 1 of 1

Facility: Amersham   Location: Chicago, IL

X Population Run JCL File Name: NRCLIC(AMERSHMP)

____ Array Attached Pop. File Name: ____

Latitude: 42 ° 06 ' 10 " Longitude: 87 ° 57 ' 35 "

Distances:		860	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(ORD1247)

Location: ____ WBAN: 94846 HDR: 1247 CODE: ORD SET#: STAR06

Temperature: ____ °C Lid Height: 930 m Rainfall: 80 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15					
Diameter (m):						

____ Area Source:						
Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
I-125			1.34E-2					
S-35			1.9E-2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Radiopharmaceutical Manufacturer Location: Billerica, MA

X Population Run JCL File Name: NRCLIC(DUPBILP)

______ Array Attached Pop. File Name: ______

Latitude: 42 ° 33 ' 40 " Longitude: 71 ° 16 ' 50 "

Distances:	300	500	1,000	3,000	5,000	20,000	40,000	80,000		
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: ______

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: ______ °C Lid Height: 600 m Rainfall: 100 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	700					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Xe-133			2.84					
P-32			1.6E-2					
S-35			1.6E-2					
I-125			2E-2					
I-131			2.52E-3					
Kr-85			9.46E-1					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Radiopharmaceutical Manufacturer Location: Boston, MA

X Population Run JCL File Name: NRCLIC(DUPBOSP)

___ Array Attached Pop. File Name: ___

Latitude: 42 ° 20 ' 00 " Longitude: 71 ° 04 ' 30 "

Distances: 200 1,000 3,000 5,000 10,000 20,000 40,000 80,000

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(BOS0211)

Location: ___ WBAN: 14739 HDR: 211 CODE: BOS SET#: STAR02

Temperature: ___ °C Lid Height: 600 m Rainfall: 100 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	915					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		9.77E+1					
S-35	D		3.78E-1					
C-14	*		8.52					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Radiopharmaceutical Manufacurer Location: Tuxedo, NY

X Population Run JCL File Name: NRCLIC(CINTCHMP)
______ Array Attached Pop. File Name: ______
Latitude: 41 ° 11 ' 25 " Longitude: 74 ° 11 ' 30 "

Distances:		960	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(SWF0185)
Location: Newburgh, NY WBAN: 14714 HDR: 185 CODE: SWF SET#: ______

Temperature: ______ °C Lid Height: 900 m Rainfall: 112 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15					
Diameter (m):	1.2					
______ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	20					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached
Comments: Stack height changed to 15 m based on new data.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: Radiopharmaceutical Manufacturer Location: Tuxedo, NY

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
I-125	D	1.0	2.48					
I-131	D	1.0	3.93					
Kr-83m	*		4.59E+2					
Kr-85m	*		1.29E+3					
Kr-87	*		1.23E+2					
Kr-88	*		1.67E+3					
Xe-133m	*		4.46E+2					
Xe-133	*		1.42E+4					
Xe-135m	*		2.88E+3					
Xe-135	*		8.06E+3					
Kr-85	*		1.7					
Ar-41	*		1.11E+3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Reference Lab Location: San Francisco Bay Area, CA

X Population Run JCL File Name: NRCLIC(REFLABP)
____ Array Attached Pop. File Name: ____
Latitude: 37 ° 52 ' 00 " Longitude: 122 ° 17 ' 00 "

Distances:	200	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	80,000						

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(OAK0319)
Location: Oakland, CA WBAN: 23230 HDR: 319 CODE: OAK SET#: ____

Temperature: ____ °C Lid Height: 480 m Rainfall: 80 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	6					
Diameter (m):	0.3					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
____ Buoyant (cal/s):						
X Momentum (m/s):	1					

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: Reference Lab Location: San Francisco Bay Area, CA

Additional Source Term

Nuclide	Class	AMAD	Release Rates (Ci/yr) Source: 1	2	3	4	5	6
H-3	*		1.08E+0					
C-14	*		3.89E-3					
S-35	W		4.65E-4					
Co-60	W		3.81E-5					
Kr-85	*		1.80E-1					
I-125	D		2.36E-3					
I-131	D		5.10E-4					
Xe-133	*		2.19E-1					
Pu-239	Y		3.66E-9					
Am-241	W		7.58E-10					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: University of MO Reactor Location: Columbia, MO

X Population Run JCL File Name: NRCLIC(UMOREACP)

Array Attached Pop. File Name:

Latitude: 38 ° 57 ' 00 " Longitude: 92 ° 19 ' 05 "

Distances: 660 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(COU0170)

Location: Columbia, MO WBAN: 13983 HDR: 170 CODE: COU SET#:

Temperature: °C Lid Height: 875 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	33					
Diameter (m):	.1					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	1					

Entered (m):

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41	*		2504					
H-3	*		1.6E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: NBS Reactor Location: Gaithersburg, MD

X Population Run JCL File Name: NRCLIC(NBSREACP)

____ Array Attached Pop. File Name: ____

Latitude: 39 ° 08 ' 00 " Longitude: 77 ° 13 ' 00 "

Distances (meters): 660 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances (meters): ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(FME1207)

Location: Ft. Meade, MD WBAN: 93733 HDR: 1207 CODE: FME SET#: ____

Temperature: ____ °C Lid Height: 790 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	33					
Diameter (m):	1					

____ Area Source:						
Circular Area (m^2):						

Plume Rise:

____ Buoyant (cal/s):						
X Momentum (m/s):	1					

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41	*		4.65E+2					
H-3	*		1.55E+2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: MIT Research Reactor Location: Boston, MA

X Population Run JCL File Name: NRCLIC(MITP)
Array Attached Pop. File Name:
Latitude: 42 ° 21 ' 30 " Longitude: 71 ° 06 ' 00 "

Distances:	400	600	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
, Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BOS1123)
Location: Boston, MA WBAN: 14739 HDR: 1123 CODE: BOS SET#: STAR05

Temperature: °C Lid Height: 615 m Rainfall: cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	50					
Diameter (m):	1					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	4					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41	*		4.2E+3					

X Additional Source Term Attached
Comments:

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989　Source Category: NRC　Page 1 of 1

Facility: University of RI Reactor　Location: Narragansett, RI

X Population Run JCL File Name: NRCLIC(URIREACP)

___ Array Attached Pop. File Name: ___

Latitude: 41 ° 27 ' 15 " Longitude: 71 ° 26 ' 35 "

Distances: (meters) 700 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: (meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(PVD0611)

Location: Providence, RI　WBAN: 14765　HDR: 611　CODE: PVD　SET#: ___

Temperature: ___ °C　Lid Height: 500 m　Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	34					
Diameter (m):	1					
___ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	1					
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ar-41	*		2.47E+2					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Tritium Lighting Manufacturer Location: Grand Island, NY

X Population Run JCL File Name: NRCLIC(NRDGRISP)

____ Array Attached Pop. File Name: ____

Latitude: 42 ° 49 ' 00 " Longitude: 78 ° 58 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____

(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(BUF0741)

Location: Buffalo, NY WBAN: 14733 HDR: 741 CODE: BUF SET#: ____

Temperature: ____ °C Lid Height: 950 m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):	1					
____ Area Source: Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
X Momentum (m/s):	7.6						
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		3.44E+2					
Am-241	W		6.1E-5					
Po-210	D		1.38E-4					
Ni-63	W		8.0E-6					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Tritium Lighting Manufacturer Location: Bloomburg, PA

X Population Run JCL File Name: NRCLIC(SAFETYP)

___ Array Attached Pop. File Name:

Latitude: 41 ° 00 ' 00 " Longitude: 76 ° 25 ' 00 "

Distances:	300	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	70,000						

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(HAR0631)

Location: Harrisburg, PA WBAN: 14751 HDR: 631 CODE: HAR SET#:

Temperature: ___ °C Lid Height: 900 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):	1					

___ Area Source:

Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):						
X Momentum (m/s):	7.6					

___ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		2193					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: UNC Naval Products Division Location: Montville, CT

X Population Run JCL File Name: NRCLIC(UNCP)

Array Attached Pop. File Name:

Latitude: 41 ° 29 ' 30 " Longitude: 72 ° 05 ' 30 "

Distances:	850	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PVD0611)

Location: Providence, RI WBAN: 14765 HDR: 0611 CODE: PVD SET#: STAR02

Temperature: °C Lid Height: 960 m Rainfall: 129 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	525					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234			4.3E-5					
U-235			1.2E-6					
U-236			7.8E-8					
U-238			2.1E-9					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Nuclear Fuel Services, Inc. Location: Erwin, TN

X Population Run JCL File Name: NRCLIC(NFSP)

____ Array Attached Pop. File Name: ____

Latitude: 36 ° 07 ' 54 " Longitude: 82 ° 25 ' 46 "

Distances:	700	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(TYS1328)

Location: Knoxville, TN WBAN: 13891 HDR: 1328 CODE: TYS SET#: STAR06

Temperature: ____ °C Lid Height: 1035 m Rainfall: 137 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	35					
Diameter (m):	1.5					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	11					
___ Entered (m):						

	A	B	C	D	E	F	G
Pasquill Stability							

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: Nuclear Fuel Services, Inc. Location: Erwin, TN

Additional Source Term

Nuclide	Class	AMAD	Source: 1 Release Rates (Ci/yr)	2	3	4	5	6
U-234	D	1.0	1.14E-3					
U-235	D	1.0	2.7E-5					
U-236	D	1.0	4.0E-7					
U-238	D	1.0	1.87E-5					
Pu-238	Y	1.0	1.38E-8					
Pu-239	Y	1.0	7.4E-9					
Pu-240	Y	1.0	6.7E-9					
Pu-241	Y	1.0	9.1E-7					
Pu-242	Y	1.0	2.9E-11					
Am-241	W	1.0	8.5E-9					
U-234	Y	1.0	2.3E-3					
U-235	Y	1.0	5.4E-5					
U-236	Y	1.0	8.2E-7					
U-238	Y	1.0	3.8E-5					
Pu-238	Y	1.0	2.8E-8					
Pu-239	Y	1.0	1.5E-8					
Pu-240	Y	1.0	1.35E-8					
Pu-241	Y	1.0	1.85E-6					
Am-241	W	1.0	1.73E-8					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: GA Technologies Location: San Diego, CA

X Population Run JCL File Name: NRCLIC(GATECHP)
Array Attached Pop. File Name:
Latitude: 32 ° 54 ' 16 " Longitude: 117 ° 13 ' 56 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(NZY0380)
Location: N. San Diego WBAN: 93112 HDR: 380 CODE: NZY SET#: –

Temperature: °C Lid Height: 1000 m Rainfall: 40 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	6					
Diameter (m):	0.5					
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	5					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: GA Technologies Location: San Diego, CA

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234	Y	1.0	3.3E-6					
U-235	Y	1.0	1.45E-5					
U-238	Y	1.0	3.6E-6					
Th-232	Y	1.0	4E-8					
Ar-41	*		1.2E+0					
Cs-137	D	1.0	1.4E-4					
Co-60	Y	1.0	4E-5					
I-131	D	1.0	1E-6					
Sr-90	D	1.0	4.8E-7					
Y-90	Y	1.0	4.8E-7					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: Aerojet Location: Jonesboro, TN

X Population Run JCL File Name: NRCLIC(AEROJETP)

___ Array Attached Pop. File Name: ___

Latitude: 36 ° 17 ' 00 " Longitude: 82 ° 23 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(TRI1191)

Location: ___ WBAN: 13877 HDR: 1191 CODE: TRI SET#: ___

Temperature: ___ °C Lid Height: 1050 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	6					
Diameter (m):	0.3					
___ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	34.4					

___ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234	Y		2.74E-4					
U-235	Y		7.01E-6					
U-238	Y		2.74E-4					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 1

Facility: G.E. Lighting Group Location: Cleveland, OH

X Population Run JCL File Name: NRCLIC(GELITP)
____ Array Attached Pop. File Name: ____
Latitude: 41 ° 20 ' 00 " Longitude: 81 ° 45 ' 00 "

Distances:	200	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(CLE0816)
Location: Cleveland, OH WBAN: 14820 HDR: 816 CODE: CLE SET#: ____

Temperature: ____ °C Lid Height: 930 m Rainfall: 90 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):	0.3					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	8					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Th-232	Y	1.0	3E-4					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Model LLW Incinerator Location: Palo Alto, CA

X Population Run JCL File Name: NRCLIC(LLWSFOP1)

____ Array Attached Pop. File Name: ____

Latitude: 37 ° 26 ' 00 " Longitude: 122 ° 11 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____
(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(SF01122)

Location: San Francisco, CA WBAN: 23234 HDR: 1122 CODE: SFO SET#: STAR05

Temperature: 20 °C Lid Height: 500 m Rainfall: 50 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15					
Diameter (m):						

____ Area Source:

Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	2.2E5						
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: Model LLW Incinerator Location: Palo Alto, CA

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		1E-1					
C-14	*		5E-2					
S-35			1E-1					
Cr-51	Y	1.0	1E-2					
I-125	D	1.0	1.5E-2					
P-32	D	1.0	7E-2					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Maximum LLW Incinerator Location: Palo Alto, CA

X Population Run JCL File Name: NRCLIC(LLWSFOP2)

___ Array Attached Pop. File Name:

Latitude: 37 ° 26 ' 00 " Longitude: 122 ° 11 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(SFO1122)

Location: San Francisco, CA WBAN: 23234 HDR: 1122 CODE: SFO SET#: STAR05

Temperature: 20 °C Lid Height: 500 m Rainfall: 50 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15					
Diameter (m):						

___ Area Source:

Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	2.2E+5					
__ Momentum (m/s):						

__ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989

Source Category: NRC

Page 2 of 2

Facility: Maximum LLW Incinerator

Location: Palo Alto, CA

Additional Source Term

	Source:		1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		1.3E+0					
C-14	*		1.5E+0					
S-35	*		8.7E-1					
Cr-51	Y	1.0	5E-2					
I-125	D	1.0	9E-2					
P-32	D	1.0	1.4E-1					
Se-75	Y	0	1E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 1 of 2

Facility: Model DoD Shipyard Location: Alameda, CA

X Population Run JCL File Name: NRCLIC(DODSHIPP)

___ Array Attached Pop. File Name: ___

Latitude: 37 ° 43 ' 00 " Longitude: 122 ° 11 ' 10 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(NGZ0322)

Location: Alameda, CA WBAN: 23239 HDR: 322 CODE: NGZ SET#: ___

Temperature: ___ °C Lid Height: 500 m Rainfall: 50 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	15					
Diameter (m):	1					
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	1					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: NRC Page 2 of 2

Facility: Model DoD Shipyard Location: Alameda, CA

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Co-60	Y		1E-3					
H-3	*		1E-3					
C-14	*		1E-1					
Kr-83m	*		2E-2					
Kr-85m	*		2.4E-2					
Kr-87	*		5E-2					
Kr-88	*		2E-2					
Xe-131m	*		5E-3					
Xe-[illegible]33m	*		1E-2					
Xe-133	*		2.1E-1					
Xe-135	*		2.5E-1					
Ar-41	*		4.1E-1					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Umetco's White Mesa Mill Location: Blanding, UT

X Population Run JCL File Name: BLANDING
____ Array Attached Pop. File Name: BLANDING
Latitude: 37 ° 31 ' 37 " Longitude: 109 ° 30 ' 33 "

Distances:	250	750	1,500	2,500	3,500	4,500	7,500	15,000	30,000	50,000
(meters)	70,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: FMN0285
Location: FARMINGTON, NM WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 10 °C Lid Height: 538 m Rainfall: 30 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1.2					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
____ Buoyant (cal/s):						
X Momentum (m/s):	12.7					

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	2.1E-2					
U-238	D	3.0	2.1E-2					
U-235	Y	1.0	1.5E-4					
U-235	D	1.0	1.5E-4					
U-234	Y	3.0	2.1E-2					
U-234	D	3.0	2.1E-2					
Th-230	Y	3.0	4.9E-4					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Umetco's White Mesa Mill Location: Blanding, UT

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	4.8E-4
Pb-210	D	3.0	1.2E-3
Po-210	W	3.0	1.2E-3

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1988 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Umetco's White Mesa Tailings Location: Blanding, UT

X Population Run JCL File Name: BLANDINA

Array Attached Pop. File Name: BLANDING

Latitude: 37 ° 31 ' 37 " Longitude: 109 ° 30 ' 33 "

Distances:	250	750	1,500	2,500	3,500	4,500	7,500	15,000	30,000	50,000
(meters)	70,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMN0285

Location: FARMINGTON, NM WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 10 °C Lid Height: 538 m Rainfall: 30 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	5.26E+5					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.4E-4					
U-238	D	3.0	1.4E-4					
U-235	Y	1.0	1.1E-6					
U-235	D	1.0	1.1E-6					
U-234	Y	3.0	1.4E-4					
U-234	D	3.0	1.4E-4					
Th-230	Y	3.0	1.4E-3					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989

Source Category: U-FUEL CYCLE

Page 2 of 2

Facility: Umetco's White Mesa Tailings

Location: Blanding, UT

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	1.4E-3
Pb-210	D	3.0	1.4E-3
Po-210	W	3.0	1.4E-3

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Rio Algom's La Sal Mill Location: La Sal, UT

X Population Run JCL File Name: LASALRIO
Array Attached Pop. File Name: LASALRIO
Latitude: 38 ° 16 ' 00 " Longitude: 109 ° 16 ' 30 "

Distances:	250	750	1,500	2,500	3,500	4,500	7,500	15,000	30,000	50,000
(meters)	70,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: GRAND JUNCTION WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 14 °C Lid Height: 538 m Rainfall: 20 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1.2					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	12.7					

Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	2.8E-2					
U-238	D	3.0	2.8E-2					
U-235	Y	1.0	2.1E-4					
U-235	D	1.0	2.1E-4					
U-234	Y	3.0	2.8E-2					
U-234	D	3.0	2.8E-2					
Th-230	Y	3.0	1.0E-4					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Rio Algom's La Sal Mill Location: La Sal, UT

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	2.8E-4
Pb-210	D	3.0	3.3E-3
Po-210	W	3.0	3.3E-4

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Pathfinder's Shirley Basin Mill Location: Casper, WY

X Population Run JCL File Name: SHIRLEYB
Array Attached Pop. File Name: SHIRLEYB
Latitude: 42 ° 22 ' 14 " Longitude: 106 ° 10 ' 37 "

Distances: 250 750 1,500 2,500 3,500 4,500 7,500 15,000 30,000 50,000
(meters) 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 6 °C Lid Height: 533 m Rainfall: 31 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1.2					

Area Source:						
Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):						
X Momentum (m/s):	12.7					
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.1E-2					
U-238	D	3.0	1.1E-2					
U-235	Y	1.0	8.0E-5					
U-235	D	1.0	8.0E-5					
U-234	Y	3.0	1.1E-2					
U-234	D	3.0	1.1E-2					
Th-230	Y	3.0	1.9E-4					

X Additional Source Term Attached
Comments: Day/night met data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Pathfinder's Shirley Basin Mill Location: Casper, WY

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	5.9E-4
Pb-210	D	3.0	5.9E-4
Po-210	W	3.0	5.9E-4

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Pathfinder's Shirley Basin Tail Location: Casper, WY

X Population Run JCL File Name: SHIRLEYA
___ Array Attached Pop. File Name: SHIRLEYB
Latitude: 42 ° 22 ' 14 " Longitude: 106 ° 10 ' 37 "

Distances:	250	750	1,500	2,500	3,500	4,500	7,500	15,000	30,000	50,000
(meters)	70,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 6 °C Lid Height: 533 m Rainfall: 31 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.11E+6					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	5.4E-3					
U-238	D	3.0	5.4E-3					
U-235	Y	1.0	3.9E-5					
U-235	D	1.0	3.9E-5					
U-234	Y	3.0	5.4E-3					
U-234	D	3.0	5.4E-3					
Th-230	Y	3.0	5.4E-2					

X Additional Source Term Attached
Comments: Area and release rate adjusted to reflect new data. Day/night data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Pathfinder's Shirley Basin Tail Location: Casper, WY

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	5.4E-2
Pb-210	D	3.0	5.4E-2
Po-210	W	3.0	5.4E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Homestake's Grants Mill Location: Grants, NM

X Population Run JCL File Name: HOMESTAK
Array Attached Pop. File Name: HOMESTAK
Latitude: 35 ° 14 ' 31 " Longitude: 107 ° 51 ' 46 "

Distances:	250	750	1,500	2,500	3,500	4,500	7,500	15,000	30,000	50,000
(meters)	70,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARANHM
Location: Ambrosia Lake, NM WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 767 m Rainfall: 21 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):	1.2					
Area Source: Circular Area (m^2):						
Plume Rise: Buoyant (cal/s):						
X Momentum (m/s):	12.7					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.7E-1					
U-238	D	3.0	1.7E-1					
U-235	Y	1.0	8.3E-4					
U-235	D	1.0	8.3E-4					
U-234	Y	3.0	1.7E-1					
U-234	D	3.0	1.7E-1					
Th-230	Y	3.0	4.3E-2					

X Additional Source Term Attached
Comments: Meteorological data changed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Homestake's Grants Mill Location: Grants, NM

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	3.9E-2
Pb-210	D	3.0	3.9E-2
Po-210	W	3.0	3.9E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Homestake's Grants Tailings Location: Grants, NM

X Population Run JCL File Name: HOMESTAA
Array Attached Pop. File Name: HOMESTAK
Latitude: 35 ° 14 ' 31 " Longitude: 107 ° 51 ' 46 "

Distances: 250 750 1,500 2,500 3,500 4,500 7,500 15,000 30,000 50,000
(meters) 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARANHM
Location: Ambrosia Lake, NM WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 767 m Rainfall: 21 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

X Area Source:

Circular Area (m^2):	8.5E+5					

Plume Rise:

Buoyant (cal/s):							
X Momentum (m/s):	12.7						
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.3E-4					
U-238	D	3.0	1.3E-4					
U-235	Y	1.0	9.5E-7					
U-235	D	1.0	9.5E-7					
U-234	Y	3.0	1.3E-4					
U-234	D	3.0	1.3E-4					
Th-230	Y	3.0	1.3E-3					

X Additional Source Term Attached
Comments: Meteorological data changed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989   Source Category: U-FUEL CYCLE   Page 2 of 2

Facility: Homestake's Grants Tailings   Location: Grants, NM

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	1.3E-3
Pb-210	D	3.0	1.3E-3
Po-210	W	3.0	1.3E-3

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: Chevron's Panna Maria Mill Location: Panna Maria, TX

X Population Run JCL File Name: PANAMARA

___ Array Attached Pop. File Name: PANAMARI

Latitude: 28 ° 57 ' 33 " Longitude: 97 ° 56 ' 31 "

Distances: 250 750 1,500 2,500 3,500 4,500 7,500 15,000 30,000 50,000

(meters) 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___

(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064

Location: SAN ANTONIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR01

Temperature: 21 °C Lid Height: 873 m Rainfall: 69 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):	1.2					
___ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):	12.7					
___ Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.9E-3					
U-238	D	3.0	1.9E-3					
U-235	Y	1.0	1.1E-5					
U-235	D	1.0	1.1E-5					
U-234	Y	3.0	1.9E-3					
U-234	D	3.0	1.9E-3					
Th-230	Y	3.0	9.6E-5					

X Additional Source Term Attached

Comments: Based on stack sampling data for 1987 - June 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: July 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: Chevron's Panna Maria Mill Location: Panna Maria, TX

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ra-226	W	3.0	3.8E-6					
Pb-210	D	3.0	3.8E-6					
Po-210	W	3.0	3.8E-6					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: AMBROSIA LAKE TAILINGS Location: AMBROSIA LAKE, NM

X Population Run JCL File Name: AMBROLAK
X Array Attached Pop. File Name: AMBROLAK
Latitude: 35° 24' 34" Longitude: 107° 47' 57"

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: ABQ0282
Location: ALBUQUERQUE WBAN: 23050 HDR: 0282 CODE: ABQ SET#: STAR03

Temperature: 13.4°C Lid Height: 767m Rainfall: 20.6cm/yr (ALBUQUERQUE)

Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.62E6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	3.1E-3					
U-238	D	3.0	3.1E-3					
U-235	Y	1.0	2.2E-5					
U-235	D	1.0	2.2E-5					
U-234	Y	3.0	3.1E-3					
U-234	D	3.0	3.1E-3					
Th-230	Y	3.0	3.1E-2					

X Additional Source Term Attached
Comment: Added July 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: AMBROSIA LAKE TAILINGS Location: AMBROSIA LAKE, NM

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	3.1E-2
Pb-210	D	3.0	3.1E-2
Po-210	W	3.0	3.1E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: LUCKY MC TAILINGS Location: RIVERTON, WYOMING

X Population Run JCL File Name: GASLUCKY
X Array Attached Pop. File Name: GASLUCKY
Latitude: 42° 49' 55" Longitude: 107° 37' 00"

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: LND1100
Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.0°C Lid Height: 608m Rainfall: 22.9cm/yr (RIVERTON & EIS)

Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

X Area Source:
Circular Area (m^2): 1.24E6

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):
Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
U-238	Y	3.0	1.1E-3
U-238	D	3.0	1.1E-3
U-235	Y	1.0	8.0E-6
U-235	D	1.0	8.0E-6
U-234	Y	3.0	1.1E-3
U-234	D	3.0	1.1E-3
Th-230	Y	3.0	1.1E-2

X Additional Source Term Attached
Comment: Added July 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: LUCKY MC TAILINGS Location: RIVERTON, WYOMING

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ra-226	W	3.0	1.1E-2					
Pb-210	D	3.0	1.1E-2					
Po-210	W	3.0	1.1E-2					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: SHERWOOD TAILINGS Location: WELLPINIT, WASH.

X Population Run JCL File Name: WELLPINI
X Array Attached Pop. File Name: WELLPINI
Latitude: 47° 52' 27" Longitude: 118° 07' 00"

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GEG0360
Location: SPOKANE WBAN: 24157 HDR: 0360 CODE: GEG SET#: STAR03

Temperature: 8.4°C Lid Height: 640m Rainfall: 31.7cm/yr (SPOKANE & EIS)

Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						

X Area Source:
Circular Area (m^2): 3.24E5

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):
Entered (m):
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
U-238	Y	3.0	1.0E-3
U-238	D	3.0	1.0E-3
U-235	Y	1.0	7.1E-6
U-235	D	1.0	7.1E-6
U-234	Y	3.0	1.0E-3
U-234	D	3.0	1.0E-3
Th-230	Y	3.0	1.0E-2

X Additional Source Term Attached
Comment: Added July 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: SHERWOOD TAILINGS Location: WELLPINIT, WASH.

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	1.0E-2
Pb-210	D	3.0	1.0E-2
Po-210	W	3.0	1.0E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: SHOOTARING CANYON TAILINGS Location: HANKSVILLE, UTAH

X Population Run JCL File Name: SHOOTAR
X Array Attached Pop. File Name: SHOOTAR
Latitude: 37° 43' 06" Longitude: 110° 40' 51"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: HV40320
Location: HANKSVILLE WBAN: 23170 HDR: 0302 CODE: 4HV SET#: STAR03

Temperature: 11.7°C Lid Height: 538m Rainfall: 12.6cm/yr (HANKSVILLE)

___ Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						
X Area Source: Circular Area (m^2):	2.83E4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	2.0E-4					
U-238	D	3.0	2.0E-4					
U-235	Y	1.0	1.4E-6					
U-235	D	1.0	1.4E-6					
U-234	Y	3.0	2.0E-4					
U-234	D	3.0	2.0E-4					
Th-230	Y	3.0	2.0E-3					

X Additional Source Term Attached
Comment: Added July 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989　　Source Category: U-FUEL CYCLE　　Page 2 of 2

Facility: SHOOTARING CANYON TAILINGS　　Location: HANKSVILLE, UTAH

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ra-226	W	3.0	2.0E-3					
Pb-210	D	3.0	2.0E-3					
Po-210	W	3.0	2.0E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 1 of 2

Facility: SWEETWATER TAILINGS Location: RAWLINS, WYOMING

X Population Run JCL File Name: SWEETWAT
X Array Attached Pop. File Name: SWEETWAT
Latitude: 42° 02' 56" Longitude: 107° 53' 28"

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: RWL1261
Location: ALBUQUERQUE WBAN: 23050 HDR: 0282 CODE: ABQ SET#: STAR03

Temperature: 6.9°C Lid Height: 533m Rainfall: 30.5cm/yr (ALBUQUERQUE)

___ Stack Source:	1	2	3	4	5	6
Height (m):	1					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.50E5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	4.3E-3					
U-238	D	3.0	4.3E-3					
U-235	Y	1.0	3.0E-5					
U-235	D	1.0	3.0E-5					
U-234	Y	3.0	4.3E-3					
U-234	D	3.0	4.3E-3					
Th-230	Y	3.0	4.3E-2					

X Additional Source Term Attached
Comment: Added July 1989.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: JULY 1989 Source Category: U-FUEL CYCLE Page 2 of 2

Facility: SWEETWATER TAILINGS Location: RAWLINS, WYOMING

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Ra-226	W	3.0	4.3E-2
Pb-210	D	3.0	4.3E-2
Po-210	W	3.0	4.3E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 1 of 1

Facility: Generic Fuel Fabrication Plant Location: Columbia, SC

X Population Run JCL File Name: FUELFABP

Array Attached Pop. File Name: FUELFAB

Latitude: ° ' " Longitude: ° ' "

Distances (meters): 805 2,414 4,023 5,632 7,241 12,068 24,135 40,190 56,280 72,405

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FUELFAB

Location: WBAN: HDR: CODE: SET#:

Temperature: 18 °C Lid Height: 1000 m Rainfall: 118 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						
Area Source: Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-234	Y	1	1.2E-3					
U-235	Y	1	6.7E-5					
U-236	Y	1	1.6E-5					
U-238	Y	1	3.0E-4					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989   Source Category: U-Fuel Cycle   Page 1 of 2

Facility: Uranium Hexafluoride Plant - WET   Location: Sequouyah, OK

X Population Run   JCL File Name: UF6WETP
___ Array Attached   Pop. File Name: UF6WET
Latitude: ___° ___' ___"   Longitude: ___° ___' ___"

Distances: (meters)	805	2,414	4,023	5,632	7,241	12,068	24,135	40,190	56,280	72,405

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run   JCL File Name: ___

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: UF6WET
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 17 °C   Lid Height: 1000 m   Rainfall: 112 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	24					
Diameter (m):	0.16					
___ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	18.4					
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ra-226	W	3	1.25E-3					
Ra-226	W	1	3.75E-3					
Th-230	Y	3	1.25E-3					
Th-230	Y	1	3.75E-3					
U-238	D	3	8.1E-3					
U-238	D	1	2.4E-2					
U-238	W	3	6.3E-4					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 2 of 2

Facility: Uranium Hexafluoride Plant - WET Location: Sequouyah, OK

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
U-238	W	1	1.9E-3
U-238	Y	3	3.8E-3
U-238	Y	1	1.1E-2
U-235	Y	1	8.1E-5
U-235	D	1	1.8E-4
U-235	Y	1	4.5E-6
U-235	W	1	1.4E-5
U-235	Y	1	2.7E-5
U-235	Y	1	5.9E-5
U-234	D	3	8.1E-3
U-234	D	1	2.4E-2
U-234	W	3	6.3E-4
U-234	W	1	1.9E-3
U-234	Y	3	3.8E-3
U-234	Y	1	1.1E-2

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989   Source Category: U-Fuel Cycle   Page 1 of 2

Facility: Uranium Hexafluoride Plant - DRY   Location: Metropolis, IL

X Population Run   JCL File Name: UF6DRYP
Array Attached   Pop. File Name: UF6DRY
Latitude: ° ' "   Longitude: ° ' "

Distances: (meters)	805	2,414	4,023	5,632	7,241	12,068	24,135	40,190	56,280	72,405

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run   JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached   STAR File Name: UF6DRY
Location: WBAN: HDR: CODE: SET#:

Temperature: 14 °C   Lid Height: 1000 m   Rainfall: 114 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	24					
Diameter (m):	0.16					
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	18.4					

Entered (m):
Pasquill Stability   A   B   C   D   E   F   G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Ra-226	W	3	1.0E-5					
Th-230	Y	3	5.0E-4					
U-234	D	3	5.6E-2					
U-234	W	3	3.0E-2					
U-234	Y	3	1.4E-2					
U-238	D	3	5.6E-2					
U-238	W	3	3.0E-2					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 2 of 2

Facility: Uranium Hexafluoride Plant - DRY Location: Metropolis IL

ADDITIONAL SOURCE TERM:

Nuclide	Class	AMAD	Release Rates (Ci/yr)
U-238	Y	3	1.4E-2
U-235	D	1	4.0E-4
U-235	W	1	2.2E-4
U-235	Y	1	1.0E-4

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989　Source Category: U-Fuel Cycle　Page 1 of 1

Facility: Generic Mill Tailings - Closed　Location: ______

X Population Run　JCL File Name: UMTCLSEP

______ Array Attached　Pop. File Name: MILLS

Latitude: ______° ______' ______"　Longitude: ______° ______' ______"

Distances: (meters)	805	2,414	4,023	5,632	7,241	12,068	24,135	40,190	56,280	72,405

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run　JCL File Name: ______

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached　STAR File Name: MILLS

Location: ______　WBAN: ______　HDR: ______　CODE: ______　SET#: ______

Temperature: 8 °C　Lid Height: 700 m　Rainfall: 28 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	7.9E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Pb-210	D	3	8.0E-2					
Ra-226	W	3	8.0E-2					
Th-230	Y	3	8.0E-2					
U-234	Y	3	8.0E-3					
U-235	Y	1	5.8E-5					
U-238	Y	3	6.0E-3					
Po-210	W	3	8.0E-2					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989   Source Category: U-Fuel Cycle   Page 1 of 1

Facility: Generic BWR   Location: ______

X Population Run JCL File Name: BWRRIVP

______ Array Attached Pop. File Name: POWER2

Latitude: ______ ° ______ ' ______ " Longitude: ______ ° ______ ' ______ "

Distances:	250	750	1,500	2,500	4,000	7,500	15,000	25,000	35,000	45,000
(meters)	55,000	70,000								

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: RIVER

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 13 °C Lid Height: 1000 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	20					
Diameter (m):						
______ Area Source:						
Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Xe-131m			2.94E+1					
Xe-133m			2.89E+1					
Xe-133			6.33E+2					
Xe-135m			5.74E+1					
Xe-135			3.77E+2					
Xe-138			6.97E+1					
Kr-85m			5.14E+1					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 2 of 2

Facility: Generic BWR Location:

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Kr-85			2.93E+0					
Kr-87			5.70E+1					
Kr-88			7.73E+1					
I-131	D	1.0	1.07E-2					
I-132	D	1.0	2.9E-2					
I-133	D	1.0	7.52E-2					
I-134	D	1.0	2.1E-2					
I-135	D	1.0	1.97E-1					
H-3	*		1.16E+1					
N-13	D	1.0	7.22E+0					
Ar-41	*		4.34E+1					
Cr-51	Y	1.0	1.55E-3					
Mn-54	W	1.0	2.16E-4					
Co-58	Y	1.0	1.12E-4					
Co-60	Y	1.0	1.84E-3					
Zn-65	Y	1.0	1.16E-4					
Sr-89	D	1.0	6.86E-3					
Sr-90	D	1.0	3.13E-4					
Nb-95	Y	1.0	3.76E-6					
Zr-95	W	1.0	3.76E-6					
Cs-137	D	1.0	1.55E-4					
Ba-140	D	1.0	9.79E-3					
La-140	W	1.0	9.79E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 1 of 1

Facility: Generic PWR Location: ______

X Population Run JCL File Name: PWRRIVP

______ Array Attached Pop. File Name: POWER2

Latitude: ______° ______' ______" Longitude: ______° ______' ______"

Distances:	250	750	1,500	2,500	4,000	7,500	15,000	25,000	35,000	45,000
(meters)	55,000	70,000								

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: RIVER

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 13 °C Lid Height: 1000 m Rainfall: 120 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	20					
Diameter (m):						
______ Area Source: Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Xe-131m			2.3E+0					
Xe-133m			4.69E+0					
Xe-133			1.02E+3					
Xe-135m			5.89E-1					
Xe-135			3.47E+1					
Xe-138			7.97E-1					
Kr-85m			6.44E-1					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: U-Fuel Cycle Page 2 of 2

Facility: Generic PWR Location:

Additional Source Term

			Source: 1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Kr-85			5.56E+0					
Kr-87			1.81E-1					
Kr-88			5.74E-1					
I-131	D	1.0	3.09E-3					
I-132	D	1.0	1.8E-6					
I-133	D	1.0	2.54E-4					
I-135	D	1.0	9.22E-7					
H-3	*		1.53E+1					
Ar-41	*		5.87E-2					
Mn-54	W	1.0	1.17E-4					
Co-60	Y	1.0	7.55E-5					
Zn-65	Y	1.0	2.22E-4					
Sr-89	D	1.0	1.48E-2					
Sr-90	D	1.0	2.72E-2					
Cs-137	D	1.0	5.66E-5					
Ba-140	D	1.0	2.33E-4					
La-140	W	1.0	1.19E-4					
Co-58	Y	1.0	2.33E-6					
Fe-59	W	1.0	3.40E-4					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: HLW Page 1 of 1

Facility: Yucca Mountain Repository Location: Yucca Mountain, NV

X Population Run JCL File Name: YUCCAP
____ Array Attached Pop. File Name: ____
Latitude: ____° ____' ____" Longitude: ____° ____' ____"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: WINDLIB(NTS)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 19 °C Lid Height: 600 m Rainfall: 9.6 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10					
Diameter (m):						

____ Area Source:						
Circular Area (m^2):						

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
H-3	*		2.8E+2					
Kr-85	*		1.4E+4					
I-129	D	1.0	2.8E-2					
C-14	*		1.1E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989　Source Category: HLW　Page 1 of 1

Facility: Waste Isolation Pilot Plant　Location: Carlsbad, NM

X Population Run　JCL File Name: WIPP76P
___ Array Attached　Pop. File Name: WIPP76
Latitude: ___° ___' ___"　Longitude: ___° ___' ___"

Distances:	800	2,400	4,000	5,600	7,200	12,000	20,000	28,000	36,000	44,000
(meters)	52,000	68,000	76,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run　JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached　STAR File Name: STARLIB(CNM1741)
Location: ___　WBAN: ___　HDR: ___　CODE: ___　SET#: ___

Temperature: 16 °C　Lid Height: 1435 m　Rainfall: 30.0 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	10	7				
Diameter (m):	2.1	3.0				

___ Area Source:						
Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):						
X Momentum (m/s):	12.0	27.0				

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Pu-238	Y	1.0	3.8E-9	6.2E-8				
Pu-239	Y	1.0	4.8E-10	4.6E-8				
Pu-240	Y	1.0	1.2E-10	1.0E-8				
Pu-241	Y	1.0	4.2E-9	2.8E-6				
Am-241	W	1.0	2.7E-9	1.6E-7				
Cm-244	W	1.0	1.1E-10	2.4E-8				

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Stauffer Location: Silver Bow, MT

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(STAUFMTP)
______ Array Attached Pop. File Name: CAAR.CAA88.POPLIB(STAFSBMT)
Latitude: 45 ° 59 ' 30 " Longitude: 112 ° 40 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(BTM0357)
Location: Butte, MT WBAN: HDR: CODE: SET#:

Temperature: 5 °C Lid Height: 1,700 m Rainfall: 38 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	27					
Diameter (m):	1.2					
______ Area Source: Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	15					

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	6.0E-4					
U-234	Y	1.0	6.0E-4					
Th-230	Y	1.0	6.0E-4					
Ra-226	W	1.0	6.0E-4					
Pb-210	Y	0.3	1.1E-1					
Po-210	Y	0.3	7.4E-1					

______ Additional Source Term Attached
Comments: JCL file name changed; Pb-210 release rate corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Monsanto Location: Soda Springs, ID

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(MONSANTP)
Array Attached Pop. File Name: CAAR.CAA88.POPLIB(SODASPRG)
Latitude: 42 ° 41 ' 30 " Longitude: 111 ° 35 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARG)
Location: Pocatello, ID WBAN: HDR: CODE: SET#:

Temperature: 8.0 °C Lid Height: 615 m Rainfall: 27 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	27					
Diameter (m):	0					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	5.0E+5					
Momentum (m/s):						
Entered (m):						

	A	B	C	D	E	F	G
Pasquill Stability							

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	5.0E-4					
U-234	Y	1.0	5.0E-4					
Th-230	Y	1.0	5.0E-4					
Ra-226	W	1.0	5.0E-4					
Pb-210	Y	0.3	3.5E-1					
Po-210	Y	0.3	1.4E+0					

Additional Source Term Attached
Comments: JCL file name changed; Met. station changed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: FMC Location: Pocatello, ID

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(FMCP)
____ Array Attached Pop. File Name: CAAR.CAA88.POPLIB(POCAIDC)
Latitude: 42 ° 54 ' 30 " Longitude: 112 ° 32 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARG)
Location: Pocatello, ID WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 8.0 °C Lid Height: 615 m Rainfall: 27 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	31					
Diameter (m):	0					
____ Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	9.5E+5					
____ Momentum (m/s):						
____ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	3.2E-3					
U-234	Y	1.0	3.2E-3					
Th-230	Y	1.0	3.2E-3					
Ra-226	W	1.0	3.2E-3					
Pb-210	Y	0.3	1.4E-1					
Po-210	Y	0.3	1.0E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Occidental Location: Columbia, TN

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(OCCOLTNP)

Array Attached Pop. File Name: CAAR.CAA88.POPLIB(OCCCOLTN)

Latitude: 35 ° 39 ' 10 " Longitude: 87 ° 2 ' 4 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BNA1232)

Location: Nashvillle, TN WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 1,075 m Rainfall: 140 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	31					
Diameter (m):	0					
Area Source:						
Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.2E+6					
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	1.0E-4					
U-234	Y	1.0	1.0E-4					
Th-230	Y	1.0	1.0E-4					
Ra-226	W	1.0	1.0E-4					
Pb-210	Y	0.3	6.4E-2					
Po-210	Y	0.3	3.1E-1					

Additional Source Term Attached

Comments: Day/Night met data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Stauffer Location: Mt. Pleasent, TN

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(STAUFPLP)
Array Attached Pop. File Name: CAAR.CAA88.POPLIB(STAUFMTP)
Latitude: 35 ° 31 ' 0 " Longitude: 87 ° 14 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BNA1232)
Location: Nashvillle, TN WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 1,075 m Rainfall: 140 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	35.4					
Diameter (m):	0					
Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	6.0E+5					
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	3.0E-4					
U-234	Y	1.0	3.0E-4					
Th-230	Y	1.0	3.0E-4					
Ra-226	W	1.0	3.0E-4					
Pb-210	Y	0.3	5.8E-2					
Po-210	Y	0.3	2.8E-1					

Additional Source Term Attached
Comments: Day/night met data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Mobil Location: Pierce, FL

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(MOBILP)
___ Array Attached Pop. File Name: CAAR.CAA88.POPLIB(MOBIL)
Latitude: 27 ° 49 ' 50 " Longitude: 81 ° 57 ' 25 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)
Location: Orlando, FL WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 23 °C Lid Height: 1,100 m Rainfall: 135 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	29.3	25.6				
Diameter (m):	2.1	2.1				
___ Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.1E+5	2.3E+5				
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0		1.6E-3				
U-234	Y	1.0		1.6E-3				
Th-230	Y	1.0		1.6E-3				
Ra-226	W	1.0		1.6E-3				
Pb-210	Y	0.3	1.1E-2	1.4E-3				
Po-210	Y	0.3	1.1E-2	2.1E-3				

___ Additional Source Term Attached
Comments: Stack diameters corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Stauffer Location: Tarpon Springs, FL

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(STAUFFLP)
Array Attached Pop. File Name: CAAR.CAA88.POPLIB(STAUFFL)
Latitude: 28 ° 10 ' 30 " Longitude: 82 ° 47 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Gro Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(TPA0915)
Location: Tampa, FL WBAN: 12842 HDR: 915 CODE: TPA SET#: STAR01

Temperature: 22.0 °C Lid Height: 1,100 m Rainfall: 185 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	48.8					
Diameter (m):	1.2					
Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.7E+5					
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	3.5E-3					
U-234	Y	1.0	3.5E-3					
Th-230	Y	1.0	3.5E-3					
Ra-226	W	1.0	3.5E-3					
Pb-210	Y	0.3	1.9E-1					
Po-210	Y	0.3	1.5E-1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Elem. Phosphorus Page 1 of 1

Facility: Monsanto Location: Columbia, TN

X Population Run JCL File Name: CAAR.CAA88.ELEMPHOS(MONSTENP)
Array Attached Pop. File Name: CAAR.CAA88.POPLIB(MONSTENN)
Latitude: 35 ° 40 ' 0 " Longitude: 87 ° 7 ' 2 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BNA1825)
Location: Nashvillle, TN WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 1,075 m Rainfall: 140 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	35					
Diameter (m):	0					
Area Source:						
Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	1.0E+6						
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	2.0E-3					
U-234	Y	1.0	2.0E-3					
Th-230	Y	1.0	2.0E-3					
Ra-226	W	1.0	2.0E-3					
Pb-210	Y	0.3	4.1E-1					
Po-210	Y	0.3	6.4E-1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Industrial Location: Layfayette, IN

X Population Run JCL File Name: INDMAXP
___ Array Attached Pop. File Name: INDRURAL
Latitude: 40 ° 22 ' 29 " Longitude: 86 ° 50 ' 06 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: IND1080
Location: WBAN: 93819 HDR: 1080 CODE: IND SET#: STAR05

Temperature: 11 °C Lid Height: 930m Rainfall: 100 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	76					
Diameter (m):	4.9					
___ Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.07E6					
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Industrial Location: Layfayette, IN

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			8.0E-3					
U-234			8.0E-3					
Th-230			4.0E-3					
Ra-226			6.0E-3					
Rn-222			8.0E-2					
Pb-210			2.0E-2					
Po-210			2.0E-2					
Th-232			4.0E-3					
Ra-228			6.0E-3					
Th-228			4.0E-3					
Ra-224			6.0E-3					
Rn-220			8.0E-2					
Pb-212			2.0E-2					
Bi-212			2.0E-2					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Large Remote, Utility Location: ______

X Population Run JCL File Name: UTLRMTEP
____ Array Attached Pop. File Name: UTILRMTE
Latitude: 38 ° 54 ' 51 " Longitude: 82 ° 07 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name: ______

Distances: ______
(meters) ______

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: CRW0655
Location: ______ WBAN: 13866 HDR: 655 CODE: CRW SET#: STAR01

Temperature: 13 °C Lid Height: 900 m Rainfall: 107 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	335	335				
Diameter (m):	13	13				

____ Area Source:
Circular Area (m^2): ______

Plume Rise:

X Buoyant (cal/s):	2.78E7	2.50E7				
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: ________ Page ____ of ____
Facility: Large Remote, Utility Location: near Charlotte, NC

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			1.7E-2	1.5E-2				
U-234			1.7E-2	1.5E-2				
Th-230			8.5E-3	7.5E-3				
Ra-226			1.3E-2	1.1E-2				
Rn-222			1.6E-1	1.4E-1				
Pb-210			4.3E-2	3.8E-2				
Po-210			4.3E-2	3.8E-2				
Th-232			9.9E-3	8.8E-3				
Ra-228			1.5E-2	1.3E-2				
Th-228			9.9E-3	8.8E-3				
Ra-224			1.5E-2	1.3E-2				
Rn-220			1.9E-1	1.7E-1				
Pb-212			5.0E-2	4.5E-2				
Bi-212			9.9E-3	8.8E-3				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Large Rural, Utility Location: Cumberland, TN

X Population Run JCL File Name: UTLRURLP
___ Array Attached Pop. File Name: UTILRURL
Latitude: 36 ° 23 ' 55 " Longitude: 87 ° 38 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: BNA1232
Location: ___ WBAN: 13897 HDR: 1232 CODE: BNA SET#: STAR06

Temperature: 15 °C Lid Height: 1080 m Rainfall: 123 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	304	304				
Diameter (m):	9.4	9.4				
___ Area Source: Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	4.13E7	2.78E7					
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Large Rural, Utility Location: Cumberland, TN

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			2.5E-2	1.7E-2				
U-234			2.5E-2	1.7E-2				
Th-230			1.3E-3	8.5E-3				
Ra-226			1.9E-2	1.3E-2				
Rn-222			2.4E-1	1.6E-1				
Pb-210			6.3E-2	4.3E-2				
Po-210			6.3E-2	4.3E-2				
Th-232			1.5E-2	9.9E-3				
Ra-228			2.3E-2	1.5E-2				
Th-228			1.5E-2	9.9E-3				
Ra-224			2.3E-2	1.5E-2				
Rn-220			2.9E-1	1.9E-2				
Pb-212			7.7E-2	5.0E-2				
Bi-212			1.5E-2	9.9E-3				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Large Suburban, Utility Location: Amos, WV

X Population Run JCL File Name: UTLSUBRP
Array Attached Pop. File Name: UTLSUBRN
Latitude: 38 ° 28 ' 26 " Longitude: 81 ° 49 ' 18 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CRW0655
Location: WBAN: 13866 HDR: 655 CODE: CRW SET#: STAR01

Temperature: 13 °C Lid Height: 1000 m Rainfall: 107 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	275	275	275			
Diameter (m):	9.2	9.2	9.2			
Area Source:						
Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.82E7	1.73E7	2.97E7			
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Large Suburban, Utility Location: Amos, WV

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			1.1E-2	1.1E-2	1.8E-2			
U-234			1.1E-2	1.1E-2	1.8E-2			
Th-230			5.5E-3	5.5E-3	9.0E-3			
Ra-226			8.3E-3	8.3E-3	1.4E-2			
Rn-222			1.1E-1	1.1E-1	1.7E-1			
Pb-210			2.8E-2	2.8E-2	4.5E-2			
Po-210			2.8E-2	2.8E-2	4.5E-2			
Th-232			6.5E-3	6.1E-3	1.1E-2			
Ra-228			9.8E-3	9.2E-3	1.7E-2			
Th-228			6.5E-3	6.1E-3	1.1E-2			
Ra-224			9.8E-3	9.2E-3	1.7E-2			
Rn-220			1.3E-1	1.2E-1	2.1E-1			
Pb-212			3.3E-2	3.1E-2	5.6E-2			
Bi-212			6.5E-3	6.1E-3	1.1E-2			

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Large Urban, Utility Location: Belews Creek, NC

X Population Run JCL File Name: UR[illegible]UTILP
___ Array Attached Pop. File Name: URBNUTIL
Latitude: 36 ° 16 ' 52 " Longitude: 80 ° 03 ' 37 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: INT0531
Location: ___ WBAN: 93807 HDR: 531 CODE: INT SET#: STAR04

Temperature: 15 °C Lid Height: 900 m Rainfall: 110 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	182	182				
Diameter (m):	7.3	7.3				
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	3.17E7	3.12E7				
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Large Urban, Utility Location: Belews Creek, NC

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			2.0E-2	1.9E-2				
U-234			2.0E-2	1.9E-2				
Th-230			1.0E-2	9.5E-3				
Ra-226			1.5E-2	1.4E-2				
Rn-222			1.9E-1	1.8E-1				
Pb-210			5.0E-2	4.8E-2				
Po-210			5.0E-2	4.8E-2				
Th-232			1.1E-2	1.1E-2				
Ra-228			1.7E-2	1.7E-2				
Th-228			1.1E-2	1.1E-2				
Ra-224			1.7E-2	1.7E-2				
Rn-220			2.1E-1	2.1E-1				
Pb-212			5.6E-2	5.6E-2				
Bi-212			1.1E-2	1.1E-2				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Typical Remote, Utility Location: Georgetown, South Carolina

X Population Run JCL File Name: GEORGSCP
Array Attached Pop. File Name: GEGTWNSC
Latitude: 33 ° 19 ' 45 " Longitude: 00 ° 00 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: MYR1027
Location: WBAN: 13717 HDR: 1027 CODE: MYR SET#: STAR05

Temperature: 19 °C Lid Height: 1020m Rainfall: 131 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	121	121				
Diameter (m):	5.5	4.9				
Area Source: Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	7.7E6	6.2E6					
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Typical Remote, Utlity Location: Georgetown, South Carolina

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			4.7E-3	9.6E-4				
U-234			4.7E-3	9.6E-4				
Th-230			2.4E-3	4.8E-4				
Ra-226			3.5E-3	7.2E-4				
Rn-222			4.5E-2	9.2E-3				
Pb-210			1.2E-2	2.4E-3				
Po-210			1.2E-2	2.4E-3				
Th-232			2.7E-3	4.7E-4				
Ra-228			4.1E-3	7.1E-4				
Th-228			2.7E-3	4.7E-4				
Ra-224			4.1E-3	7.1E-4				
Rn-220			5.2E-2	9.1E-3				
Pb-212			1.4E-2	2.4E-3				
Bi-212			2.7E-3	4.7E-4				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Typical Rural, Utility Location: Owensboro, Kentucky

X Population Run JCL File Name: OWENSKYP
___ Array Attached Pop. File Name: OWENSKY
Latitude: 37 ° 47 ' 30 " Longitude: 87 ° 03 ' 53 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: EVV1009

Location: ___ WBAN: 93817 HDR: 1009 CODE: EVV SET#: STAR05

Temperature: 13 °C Lid Height: 1020m Rainfall: 111 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	198	198				
Diameter (m):	5.5	5.5				
___ Area Source: Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	3.4E6	5.8E6				
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Typtical Rural, Utility Location: Owensboro, Kentucky

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			2.1E-3	3.5E-3				
U-234			2.1E-3	3.5E-3				
Th-230			1.1E-3	1.8E-3				
Ra-226			1.6E-3	2.6E-3				
Rn-222			2.0E-2	3.4E-2				
Pb-210			5.3E-3	8.8E-3				
Po-210			5.3E-3	8.8E-3				
Th-232			2.8E-4	2.0E-3				
Ra-228			4.2E-4	3.0E-3				
Th-228			2.8E-4	2.0E-3				
Ra-224			4.2E-4	3.0E-3				
Rn-220			5.4E-3	3.9E-2				
Pb-212			1.4E-3	1.0E-2				
Bi-212			2.8E-4	2.0E-3				

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Typical Suburban, Utility Location: Charlotte, North Carolina

X Population Run JCL File Name: CHARLNCP
Array Attached Pop. File Name: CHARLTNC
Latitude: 35 ° 11 ' 23 " Longitude: 81 ° 00 ' 44 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CLT0682
Location: WBAN: 13881 HDR: 682 CODE: CLT SET#: STAR01

Temperature: 13 °C Lid Height: 950 m Rainfall: 121 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	76	76	76	76	76	
Diameter (m):	3.4	3.4	4.1	4.1	4.1	
Area Source:						
Circular Area (m^2):						
Plume Rise:						
X Buoyant (cal/s):	1.7E6	1.6E6	5.3E6	2.7E6	3.8E6	
Momentum (m/s):						
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Typical Suburban, Utility Location: Charlotte, North Carolina

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			1.0E-3	1.0E-3	3.3E-3	1.7E-3	2.4E-3	
U-234			1.0E-3	1.0E-3	3.3E-3	1.7E-3	2.4E-3	
Th-230			5.0E-4	5.0E-4	1.7E-3	8.5E-4	1.2E-3	
Ra-226			7.5E-4	7.5E-4	2.5E-3	1.3E-3	1.8E-3	
Rn-222			9.6E-3	9.6E-3	3.2E-2	1.6E-2	2.3E-2	
Pb-210			2.5E-3	2.5E-3	8.3E-3	4.3E-3	6.0E-3	
Po-210			2.5E-3	2.5E-3	8.3E-3	4.3E-3	6.0E-3	
Th-232			6.0E-4	5.8E-3	1.9E-3	9.7E-4	1.4E-3	
Ra-228			9.0E-4	8.7E-3	2.9E-3	1.5E-3	2.1E-3	
Th-228			6.0E-4	5.8E-3	1.9E-3	9.7E-4	1.4E-3	
Ra-224			9.0E-4	8.7E-3	2.9E-3	1.5E-3	2.1E-3	
Rn-220			1.2E-2	1.1E-1	3.7E-2	1.9E-2	2.7E-2	
Pb-212			3.1E-3	3.0E-2	9.7E-3	4.9E-3	7.1E-3	
Bi-212			6.0E-4	5.8E-3	1.9E-3	9.7E-4	1.4E-3	

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 1 of 2
Facility: Typical Urban,Utility Location: Alexandria, Virginia

X Population Run JCL File Name: ALEXVAP
____ Array Attached Pop. File Name: ALEXVA
Latitude: 38 ° 49 ' 15 " Longitude: 77 ° 02 ' 28 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: IAD0398
Location: ____ WBAN: 93738 HDR: 398 CODE: IAD SET#: STAR04

Temperature: 12 °C Lid Height: 800 m Rainfall: 102 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	50	50	50			
Diameter (m):	2.4	2.4	2.4			
____ Area Source: Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	2.6E6	2.8E6	3.0E6			
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability							
	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Coal-Fired Boiler Page 2 of 2
Facility: Typical Urban,Utility Location: Alexandria, Virginia

Additional Source term

			stack #1	#2	#3	#4	#5	#6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238			1.6E-3	1.7E-3	1.8E-3			
U-234			1.6E-3	1.7E-3	1.8E-3			
Th-230			8.0E-4	8.5E-4	9.0E-4			
Ra-226			1.2E-3	1.3E-3	1.4E-3			
Rn-222			1.5E-2	1.6E-2	1.7E-2			
Pb-210			4.0E-3	4.3E-3	4.5E-3			
Po-210			4.0E-3	4.3E-3	4.5E-3			
Th-232			9.3E-4	4.1E-4	1.1E-3			
Ra-228			1.4E-3	6.2E-4	1.7E-3			
Th-228			9.3E-4	4.1E-4	1.1E-3			
Ra-224			1.4E-3	6.2E-4	1.7E-3			
Rn-220			1.8E-2	7.9E-3	2.1E-2			
Pb-212			4.7E-3	2.1E-3	5.6E-3			
Bi-212			9.3E-4	4.1E-4	1.1E-3			

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Tuba City Location: Tuba City, AZ

X Population Run JCL File Name: MILLINA(TUBACITY)
Array Attached Pop. File Name: TUBACITY
Latitude: 36° 08' 41" Longitude: 111° 08' 08"

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMN0285
Location: Farmington WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 14.2 °C Lid Height: 538 m Rainfall: 19.8 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	8.90E+4					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.6E+1					

Additional Source Term Attached
Comments: Release rate based on cover design of 9.3 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Durango - Bodo Canyon Site Location: Durango, CO

X Population Run JCL File Name: MILLINA(DURANGO)
X Array Attached Pop. File Name: DURANGO
Latitude: 37 ° 15 ' 00 " Longitude: 107 ° 54 ' 00 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: FMN0285
Location: Farmington WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 8.2 °C Lid Height: 538 m Rainfall: 47.3 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 1.62E+5

Plume Rise:
____ Buoyant (cal/s):
____ Momentum (m/s):
____ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.0E+2					

____ Additional Source Term Attached
Comments: Release rate based on cover design of 20 pCi/m^2-s. Area size, nearest residence and coordinates from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Grand Junction - Cheney Site Location: Grand Junction, CO

X Population Run JCL File Name: MILLINA(GRANJUNC)
X Array Attached Pop. File Name: GRANJUNC
Latitude: 38 ° 54 ' 30 " Longitude: 108 ° 20 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: GJT0476
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 11.5 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.51E+5					

Plume Rise:

___Buoyant (cal/s):							
___Momentum (m/s):							
___Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.1E+1					

____ Additional Source Term Attached

Comments: Release rate based on cover design of 6.5 pCi/m^2-s. Area size, nearest residence, 0-5 km population, and coordinates from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Gunnison - Landfill Site Location: Gunnison, CO

X Population Run JCL File Name: MILLINA(GUNNISON)
X Array Attached Pop. File Name: GUNNISON
Latitude: 38 ° 30 ' 42 " Longitude: 106 ° 50 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: GJT0476
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 2.9 °C Lid Height: 538 m Rainfall: 27.4 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.54E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			9.2E+0					

___ Additional Source Term Attached

Comments: Release rate based on cover design of 1.9 pCi/m^2-s. Area size, nearest residence, 0-5 km population, and coordinates from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Maybell Location: Maybell, CO

X Population Run JCL File Name: MILLINA(MAYBELL)

___ Array Attached Pop. File Name: MAYBELL

Latitude: 40 ° 32 ' 36 " Longitude: 107 ° 59 ' 36 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: EEE1420

Location: Eagle County WBAN: ___ HDR: 1420 CODE: EEE SET#: ___

Temperature: 5.8 °C Lid Height: 538 m Rainfall: 33.8 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.24E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			7.3E+1					

___ Additional Source Term Attached

Comments: Release rate based on cover design of 7.1 pCi/m^2-s. Change MET Station.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Naturita Location: Naturita, CO

X Population Run JCL File Name: MILLINA(NATURITA)
X Array Attached Pop. File Name: NATURITA
Latitude: 38 ° 12 ' 00 " Longitude: 108 ° 37 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 11.5 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 9.31E+4

Plume Rise:							
Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.9E+1					

Additional Source Term Attached
Comments: Release rate based on assumed 20 pCi/m^2-s. New 0-5 km/SC&A. Pile cover design and new location requested from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Slick Rock Location: Slick Rock, CO

X Population Run JCL File Name: MILLINA(SLICKUC)
X Array Attached Pop. File Name: SLICKUC
Latitude: 38 ° 02 ' 43 " Longitude: 108 ° 54 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 9.3 °C Lid Height: 538 m Rainfall: 32.3 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.43E+4					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD	Release Rates					
Rn-222			4.4E+0					

Additional Source Term Attached
Comments: Release rate based on cover design of 5.8 pCi/m^2-s. New 0-5 km/SC&A.
Pile size from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Lowman Location: Lowman, ID

X Population Run JCL File Name: MILLINA(LOWMAN)
____ Array Attached Pop. File Name: LOWMAN
Latitude: 44 ° 05 ' 06 " Longitude: 115 ° 36 ' 27 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: BOI0653
Location: BOISE WBAN: 24131 HDR: 0653 CODE: BOI SET#: STAR03

Temperature: 6.9 °C Lid Height: 567 m Rainfall: 64.4 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.02E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.6E+0					

____ Additional Source Term Attached
Comments: Release rate based on cover design of 5.7 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Ambrosia Lake Location: Ambrosia Lake, NM

X Population Run JCL File Name: MILLINA(AMBROLAK)
X Array Attached Pop. File Name: AMBROLAK
Latitude: 35 ° 24 ' 34 " Longitude: 107 ° 47 ' 57 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GNT1246
Location: GRANTS-MILAN WBAN: HDR: 1246 CODE: GNT SET#:

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	4.25E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.2E+2					

Additional Source Term Attached
Comments: Release rate based on cover design of 16.7 pCi/m^2-s. Change MET data to Grants-Milan station. New 0-5 km/SC&A

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Shiprock Location: Shiprock, NM

X Population Run JCL File Name: MILLINA(SHIPROCK)
X Array Attached Pop. File Name: SHIPROCK
Latitude: 36 ° 46 ' 11 " Longitude: 108 ° 41 ' 06 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMN0285
Location: FARMINGTON WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 11.6 °C Lid Height: 538 m Rainfall: 21.2 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.91E+5					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.8E+2					

Additional Source Term Attached
Comments: Release rate based on cover design of 20 pCi/m^2-s. New 0-5 km/SC&A

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Bowman/Belfield Combined Location: Bowman, ND

X Population Run JCL File Name: MILLINA(BOWMAN)
Array Attached Pop. File Name: BOWMAN
Latitude: 46 ° 13 ' 01 " Longitude: 103 ° 32 ' 58 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: DIK0509
Location: DICKINSON WBAN: 24012 HDR: 0509 CODE: DIK SET#: STAR03

Temperature: 5.4 °C Lid Height: 522 m Rainfall: 40.9 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 4.86E+[illegible]

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):
Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			6.0E+0					

Additional Source Term Attached
Comments: Release rate based on cover design of 3.9 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Lakeview Location: Lakeview, OR

X Population Run JCL File Name: MILLINA(LAKEVIEW)
____ Array Attached Pop. File Name: LAKEVIEW
Latitude: 42° 17' 00" Longitude: 120° 25' 00"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: LMT0425
Location: KALAMETH FALLS WBAN: 94236 HDR: 0425 CODE: LMT SET#: STAR04

Temperature: 8.0 °C Lid Height: 505 m Rainfall: 40.1 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.21E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.9E+1					

____ Additional Source Term Attached
Comments: Release rate based on cover design of 7.5 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Canonsburg Location: Canonsburg, PA

X Population Run JCL File Name: MILLINA(CANSBURG)
___ Array Attached Pop. File Name: CANSBURG
Latitude: 40 ° 15 ' 22 " Longitude: 80 ° 12 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: PIT1427
Location: PITTSBURG WBAN: 94823 HDR: 1427 CODE: PIT SET#: STAR04

Temperature: 10.2 °C Lid Height: 750 m Rainfall: 92.2 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	7.28E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.6E+1					

___ Additional Source Term Attached
Comments: Release rate based on cover design of 7 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Falls City Location: Falls City, TX

X Population Run JCL File Name: MILLINA(FALLCITY)

Array Attached Pop. File Name: FALLCITY

Latitude: 28 ° 54 ' 16 " Longitude: 98 ° 07 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: SAT0064

Location: SAN ANTONIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR04

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2): 5.91E+5

Plume Rise:

Buoyant (cal/s):

Momentum (m/s):

Entered (m):

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Rn-222			2.5E+2

Additional Source Term Attached

Comments: Release rate based on cover design of 13.2 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Green River Location: Green River, UT

X Population Run JCL File Name: MILLINA(GREENRIV)
______ Array Attached Pop. File Name: GREENRIV
Latitude: 38 ° 58 ' 51 " Longitude: 110 ° 08 ' 42 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances: ______
(meters) ______

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: HNV0302
Location: HANKSVILLE WBAN: ______ HDR: 0302 CODE: HNV SET#: ______

Temperature: 10.8 °C Lid Height: 538 m Rainfall: 15.3 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.64E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.7E-1					

______ Additional Source Term Attached
Comments: Release rate based on cover design of 0.5 pCi/m^2-s. Change MET DATA

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Mexican Hat Location: Mexican Hat, UT

X Population Run JCL File Name: MILLINA(MEXICAN)
X Array Attached Pop. File Name: MEXICAN
Latitude: 37° 08' 06" Longitude: 109° 52' 38"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: FMN0285
Location: FARMINGTON WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 9.8 °C Lid Height: 538 m Rainfall: 28.9 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.75E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.0E+2					

___ Additional Source Term Attached
Comments: Release rate based on cover design of 12 pCi/m^2-s. New 0-5 km/SC&A

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Salt Lake City - S. Clive Site Location: ~ 80 km W of Salt Lake City

X Population Run JCL File Name: MILLINA(SALTLAKE)
Array Attached Pop. File Name: SALTLAKE
Latitude: 40 ° 41 ' 00 " Longitude: 113 ° 07 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: SLC1411
Location: SALT LAKE CITY WBAN: 24127 HDR: 1411 CODE: SLC SET#: STAR07

Temperature: 10.4 °C Lid Height: 533 m Rainfall: 41.2 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.01E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.3E+2					

Additional Source Term Attached
Comments: Release rate based on cover design of 20 pCi/m^2-s. Fix DAYNITE MET DATA
New pile size per DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Inactive Tailings @ UMTRCA Page 1 of 1

Facility: Old/New Rifle - Estes Gulch Site Location: N. of Rifle, CO

X Population Run JCL File Name: MILLINA(ESTESGUL)
X Array Attached Pop. File Name: ESTESGUL
Latitude: 39° 36' 00" Longitude: 107° 48' 00"

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 11.5 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.87E+5					

Plume Rise:

Buoyancy (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.8E+2					

Additional Source Term Attached
Comments: Release rate based on cover design of 20 pCi/m^2-s. New 0-5 km/DOE. Pile size and coordinates also from DOE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Cotter's Canon City Mill Location: Canon City, CO

X Population Run JCL File Name: MILLLIC.Y15(CANONCIT)
Array Attached Pop. File Name: CANONCIT
Latitude: 38° 23' 46" Longitude: 105° 13' 45"

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: PUB0564
Location: PUEBLO WBAN: 93058 HDR: 0564 CODE: PUB SET#: STAR04

Temperature: 12.3 °C Lid Height: 700 m Rainfall: 32.2 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.26E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.0E+2					

Additional Source Term Attached
Comments: Mill is on standby. New pile configurations and average Ra-226 values from Cotter comments. 0-5 km demography confirmed by SC&A.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Rio Algom's Quivera Mill Location: Ambrosia Lake, NM

X Population Run JCL File Name: MILLLIC.Y15(AMBROSIA)
X Array Attached Pop. File Name: AMBROSIA
Latitude: 35 ° 23 ' 39 " Longitude: 107 ° 49 ' 47 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARANHM
Location: AMBROSIA LAKE WBAN: HDR: CODE: SET#:

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.62E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.1E+3					

Additional Source Term Attached

Comments: Mill is on standby. Area for currently active areas (401 acres). Source term for operating and drying includes evap ponds, source term for UMTRCA based on tailings area only. New 0-5 km population from SC&A. MET data from ARCO for Ambrosia Lake

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Homestake's Homestake Mill Location: Ambrosia Lake, NM

X Population Run JCL File Name: MILLLIC.Y15(HOMESTAK)
X Array Attached Pop. File Name: HOMESTAK
Latitude: 35 ° 14 ' 31 " Longitude: 107 ° 51 ' 46 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARANHM
Location: AMBROSIA LAKE WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	8.50E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.1E+3					

___ Additional Source Term Attached

Comments: Mill is operating. Area and source term based on data in AMC's comments. New 0-5 km population from SC&A. MET data from ARCO for Ambrosia Lake. 70 acre dry area assessed using 65 pCi/g during operations due to cyclone separation of sands and slimes.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Chevron's Panna Maria Mill Location: Panna Maria, TX

X Population Run JCL File Name: MILLLIC.Y15(PANAMARI)
____ Array Attached Pop. File Name: PANAMARI
Latitude: 28 ° 57 ' 33 " Longitude: 97 ° 56 ' 31 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: SAT0064
Location: SAN ANTANIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR01

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	6.47E+5					

Plume Rise:

____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.8E+2					

____ Additional Source Term Attached
Comments: Mill is operating. Area and source term based on data in comments.
Operating source term 0 due to moisture.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: UMETCO's White Mesa Mill Location: Blanding, UT

X Population Run JCL File Name: MILLLIC.Y15(BLANDING)

___ Array Attached Pop. File Name: BLANDING

Latitude: 37 ° 31 ' 37 " Longitude: 109 ° 30 ' 33 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: FMN0285

Location: FARMINGTON WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 9.9 °C Lid Height: 538 m Rainfall: 29.7 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.26E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.4E+3					

___ Additional Source Term Attached

Comments: Mill is operating. Area and source term based on data in comments. Source term based on 5 acres and 981 pCi/g. Note: UMETCO says flux 118 pCi/m^2-s due to moisture. Cover design 7 pCi/m^2-s.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 **Source Category:** Operable Tailings - 15/5/50 **Page** 1 **of** 1

Facility: Rio Algom's La Sal Mill **Location:** La Sal, UT

X **Population Run** **JCL File Name:** MILLLIC.Y15(LASALRIO)
X **Array Attached** **Pop. File Name:** LASALRIO
Latitude: 38 ° 15 ' 00 " **Longitude:** 109 ° 16 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	**F1-Grown at Home**	**F2-Grown Regionally**	**F3-Imported**	**Urban/Low Productivity**	**Rural**
Meat:					
Milk:					
Vegetables:					

____ **Individual Run** **JCL File Name:**

Distances:
(meters)

Food Fractions:	**F1-Grown at Home**	**F2-Grown Regionally**	**F3-Imported**	**Urban/Low Productivity**	**Rural**
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ **Array Attached** **STAR File Name:** GJT0476
Location: GRAND JUNCTION **WBAN:** 23066 **HDR:** 0476 **CODE:** GJT **SET#:** STAR03

Temperature: 13.7 °C **Lid Height:** 538 m **Rainfall:** 20.3 cm/yr

____ **Stack Source:**	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X **Area Source:**						
Circular Area (m^2):	1.90E+5					

Plume Rise:

___ **Buoyant (cal/s):**							
___ **Momentum (m/s):**							
___ **Entered (m):**							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	**Class**	**AMAD**	**Release Rates (Ci/yr)**					
Rn-222			5.3E+2					

____ **Additional Source Term Attached**

Comments: Mill is on standby. Area and Ra-226 based on commenications with B. Reaveau. Source term during operation 0 due to moisture in carbonate tails. Upper pond covered to UMTRCA so not included in assessment. New 0-5 km demography per SC&A.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Plateau Resources' Shootaring Mill Location: Hanksville, UT

X Population Run JCL File Name: MILLLIC.Y15(SHOOTAR)
Array Attached Pop. File Name: SHOOTAR
Latitude: 37 ° 43 ' 06 " Longitude: 110 ° 40 ' 51 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: 4HV0320
Location: HANKSVILLE WBAN: 23170 HDR: 0320 CODE: 4HV SET#: STAR03

Temperature: 11.7 °C Lid Height: 538 m Rainfall: 12.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.83E+4					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			6.1E+1					

Additional Source Term Attached
Comments: Mill is on standby. Areas and source term unchanged from draft.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Western Nuclear's Sherwood Mill Location: Wellpinit, WA

X Population Run JCL File Name: MILLLIC.Y15(WELLPINI)
___ Array Attached Pop. File Name: WELLPINI
Latitude: 47 ° 52 ' 27 " Longitude: 118 ° 07 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: GEG0360
Location: SPOKANE WBAN: 24157 HDR: 0360 CODE: GEG SET#: STAR03

Temperature: 8.4 °C Lid Height: 640 m Rainfall: 31.7 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.24E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.1E+2					

___ Additional Source Term Attached
Comments: Mill is on standby. Areas based on site visit by SC&A, and 0-5 km demography confirmed by 5/89 site visit.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Pathfinder's Lucky Mc Mill Location: Riverton, WY

X Population Run JCL File Name: MILLLIC.Y15(GASLUCKY)

____ Array Attached Pop. File Name: GASLUCKY

Latitude: 42 ° 49 ' 55 " Longitude: 107 ° 37 ' 00 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: LND1100

Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.0 °C Lid Height: 608 m Rainfall: 22.9 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.24E+6					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.0E+3					

____ Additional Source Term Attached

Comments: Mill is on standby. Areas and source term based on comments. Source term for operating uses 0 flux for 108 ares under interim clay cover. Fix DAYNITE MET data.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Pathfinder's Shirley Basin Mill Location: Casper, WY

X Population Run JCL File Name: MILLLIC.Y15(SHIRLEYB)
Array Attached Pop. File Name: SHIRLEYB
Latitude: 42 ° 22 ' 14 " Longitude: 106 ° 10 ' 37 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 5.3 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.11E+6					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.4E+3					

Additional Source Term Attached
Comments: Mill is operating. Areas and source term based on comments.
Fix DAYNITE MET data.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Operable Tailings - 15/5/50 Page 1 of 1

Facility: Minerals Expl.'s Sweetwater Mill Location: Rawlins, WY

X Population Run JCL File Name: MILLLIC.Y15(SWEETWAT)
Array Attached Pop. File Name: SWEETWAT
Latitude: 42 ° 02 ' 56 " Longitude: 107 ° 53 ' 28 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: RWL1261
Location: RAWLINS WBAN: 24057 HDR: 1261 CODE: RWL SET#: STAR06

Temperature: 6.9 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.50E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.2E+2					

Additional Source Term Attached
Comments: Mill is on standby. Areas and source terms unchanged from draft.
Fix DAYNITE MET data.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Homestake Location: Grants, N.M.

X Population Run JCL File Name: MILLLIC.20(HOMESTAK)
____ Array Attached Pop. File Name: HOMESTAK
Latitude: 35 ° 14 ' 31 " Longitude: 107 ° 51 ' 46 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: (meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARANHM
Location: AMBROSIA LAKE WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m).						
Diameter (m):						

X Area Source:
Circular Area (m^2): 8.5E+5

Plume Rise:							
____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			4.5E+2					

____ Additional Source Term Attached

Comments: Interim cover in place on secondary impoundment; area changed per comments; 0-5 km demography updated, met data changed to Ambrosia Lake.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Highland Location: Douglas, Wyoming

X Population Run JCL File Name: MILLLIC.20(HIGHLAND)
___ Array Attached Pop. File Name: HIGHLAND
Latitude: 43 ° 04 ' 07 " Longitude: 105 ° 29 ' 49 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 7.3 °C Lid Height: 533 m Rainfall: 29.0 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	8.09E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.1E+2					

___ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; day/night met data corrected; reclamation in progress

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Ray Point Location: Three Rivers, Texas

X Population Run JCL File Name: MILLLIC.20(RAYPOINT)

___ Array Attached Pop. File Name: RAYPOINT

Latitude: 28 ° 31 ' 11 " Longitude: 98 ° 06 ' 05 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064

Location: SAN ANTONIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR01

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.90E+5					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.2E+2					

___ Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate; reclaimed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Conquista Location: Falls City, Texas

X Population Run JCL File Name: MILLLIC.20(CONQUIST)
Array Attached Pop. File Name: CONQUIST
Latitude: 28 ° 54 ' 03 " Longitude: 98 ° 05 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: SAT0064
Location: SAN ANTONIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR01

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 9.71E+5

Plume Rise:							
Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			6.1E+2					

Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation in progress.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Federal American Location: Riverton, Wyoming

X Population Run JCL File Name: MILLLIC.20(FEDAMERI)

______ Array Attached Pop. File Name: FEDAMERI

Latitude: 42 ° 47 ' 59 " Longitude: 107 ° 38 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: LND1100

Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.0 °C Lid Height: 608 m Rainfall: 25.4 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	4.73E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.0E+2					

______ Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate, Day/night data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Shootaring Canyon Location: Hanksville, Utah

X Population Run JCL File Name: MILLLIC.20(SHOOTAR)
___ Array Attached Pop. File Name: SHOOTAR
Latitude: 37° 43' 06" Longitude: 110° 40' 51"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: 4HV0320
Location: HANKSVILLE WBAN: 23170 HDR: 0320 CODE: 4HV SET#: STAR03

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.83E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.8E+2					

___ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Petrotomics Location: Medicine Bow, Wyoming

X Population Run JCL File Name: MILLLIC.20(PETROTOM)
____ Array Attached Pop. File Name: PETROTOM
Latitude: 42 ° 20 ' 04 " Longitude: 106 ° 11 ' 49 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____
(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 5.3 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 5.67E+5

Plume Rise:
___ Buoyant (cal/s):
___ Momentum (m/s):
___ Entered (m):
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.6E+2					

____ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; day/night data corrected; reclamation pending design approval.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Edgemont Location: Edgemont, S.D.

X Population Run JCL File Name: MILLLIC.20(EDGEMONT)
______ Array Attached Pop. File Name: EDGEMONT
Latitude: 43 ° 16 ' 30 " Longitude: 103 ° 47 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: RFP0336
Location: RAPID CITY WBAN: 24090 HDR: 0336 CODE: RFP SET#: STAR03

Temperature: 8.7 °C Lid Height: 552 m Rainfall: 38.3 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	4.98E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.1E+2					

______ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclaimed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Umetco Gas Hills Location: Riverton, Wyoming

X Population Run JCL File Name: MILLLIC.20(UCCGASHI)
Array Attached Pop. File Name: UCCGASHI
Latitude: 42° 49' 45" Longitude: 107° 29' 34"

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: LND1100
Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.0 °C Lid Height: 608 m Rainfall: 25.4 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	8.82E+5					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.6E+2					

Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate; reclamation in progress.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Kerr-McGee Location: Ambrosia Lake, N.M.

X Population Run JCL File Name: MILLLIC.20(AMBROSIA)
___ Array Attached Pop. File Name: AMBROSIA
Latitude: 35 ° 23 ' 39 " Longitude: 107 ° 49 ' 47 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARANHM
Location: AMBROSIA LAKE WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source: Circular Area (m^2):	3.02E+5					

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			9.4E+2					

___ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation of main impoundment & unlined evaporation ponds in progress; 0-5 km demography updated; met data changed to Ambrosia Lake.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Sweetwater Location: Rawlins, Wyoming

X Population Run JCL File Name: MILLLIC.20(SWEETWAT)
______ Array Attached Pop. File Name: SWEETWAT
Latitude: 42 ° 02 ' 56 " Longitude: 107 ° 53 ' 28 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:	______	______	______		
Milk:	______	______	______	______	______
Vegetables:	______	______	______		

______ Individual Run JCL File Name: ______

Distances (meters): ______

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:	______	______	______		
Milk:	______	______	______	______	______
Vegetables:	______	______	______		

Meteorological (STAR) Data: ______ Array Attached STAR File Name: RWL1261
Location: RAWLINS WBAN: 24057 HDR: 1261 CODE: RWL SET#: STAR06

Temperature: 6.9 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 1.50E+5

Plume Rise:
___ Buoyant (cal/s): ______
___ Momentum (m/s): ______
___ Entered (m): ______
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Rn-222			9.5E+1

______ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; day/night met data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Split Rock Location: Jeffrey City, Wyoming

X Population Run JCL File Name: MILLLIC.20(JEFFREYC)

Array Attached Pop. File Name: JEFFREYC

Latitude: 42 ° 30 ' 32 " Longitude: 107 ° 47 ' 14 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: LND1100

Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.9 °C Lid Height: 608 m Rainfall: 25.4 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	6.31E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			4.0E+2					

Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate. Day/night data set corrected. Reclamation in progress. 0-5 km demography updated.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Uravan Location: Uravan, Colorado

X Population Run JCL File Name: MILLLIC.20(URAVANUN)
Array Attached Pop. File Name: URAVANUN
Latitude: 38 ° 22 ' 00 " Longitude: 108 ° 45 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: GRAND JUNCTION WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 9.4 °C Lid Height: 538 m Rainfall: 29.4 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 2.80E+5

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.8E+1					

Additional Source Term Attached
Comments: 2 pCi/m^2-sec release rate; reclamation in progress; 0-5 km demography updated.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Canon City Location: Canon City, Colorado

X Population Run JCL File Name: MILLLIC.20(CANONCIT)

____ Array Attached Pop. File Name: CANONCIT

Latitude: 38 ° 23 ' 46 " Longitude: 105 ° 13 ' 45 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions: F1-Grown at Home F2-Grown Regionally F3-Imported Urban/Low Productivity Rural
Meat:
Milk:
Vegetables:

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions: F1-Grown at Home F2-Grown Regionally F3-Imported Urban/Low Productivity Rural
Meat:
Milk:
Vegetables:

Meteorological (STAR) Data: ____ Array Attached STAR File Name: PUB0564
Location: PUEBLO WBAN: 93058 HDR: 0564 CODE: PUB SET#: STAR04

Temperature: 12.3 °C Lid Height: 700 m Rainfall: 32.2 cm/yr

____ Stack Source: 1 2 3 4 5 6
Height (m):
Diameter (m):

X Area Source:
Circular Area (m^2): 5.3E+5

Plume Rise:
____ Buoyant (cal/s):
____ Momentum (m/s):
____ Entered (m):
Pasquill Stability A B C D E F G

Nuclide Class AMAD Release Rates (Ci/yr)

Rn-222 3.3E+1

____ Additional Source Term Attached
Comments: 2 pCi/m^2-sec release rate; 0-5 km demography verified; area changed per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: L-Bar Location: Seyboyeta, N.M.

X Population Run JCL File Name: MILLLIC.20(LBARSOHI)
____ Array Attached Pop. File Name: LBARSOHI
Latitude: 35 ° 11 ' 09 " Longitude: 107 ° 20 ' 09 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: ABQ0282
Location: ALBUQUERQUE WBAN: 23050 HDR: 0282 CODE: ABQ SET#: STAR03

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.18E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.3E+2					

____ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation in progress.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Rio Algom Location: La Sal, Utah

X Population Run JCL File Name: MILLLIC.20(LASALRIO)
Array Attached Pop. File Name: LASALRIO
Latitude: 38 ° 15 ' 00 " Longitude: 109 ° 16 ' 30 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GJT0476
Location: GRAND JUNCTION WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 3.7E+5

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.4E+2					

Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation of upper inpoundment in progress; area changed per comments; 0-5 km demography updated.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Shirley Basin Location: Casper, Wyoming

X Population Run JCL File Name: MILLLIC.20(SHIRLEYB)

____ Array Attached Pop. File Name: SHIRLEYB

Latitude: 42 ° 22 ' 14 " Longitude: 106 ° 10 ' 37 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: CPR1564

Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 5.3 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.1E+6					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			7.0E+2					

____ Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate; day/night met data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Panna Maria Location: Panna Maria, Texas

X Population Run JCL File Name: MILLLIC.20(PANAMARI)
Array Attached Pop. File Name: PANAMARI
Latitude: 28° 57' 33" Longitude: 97° 56' 31"

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: SAT0064
Location: SAN ANTONIO WBAN: 12921 HDR: 0064 CODE: SAT SET#: STAR01

Temperature: 20.4 °C Lid Height: 873 m Rainfall: 68.6 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	6.5E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			4.1E+2					

Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; area changed per comments; 0-5 km demography verified.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: White Mesa Location: Blanding, Utah

X Population Run JCL File Name: MILLLIC.20(BLANDING)
____ Array Attached Pop. File Name: BLANDING
Latitude: 37 ° 31 ' 37 " Longitude: 109 ° 30 ' 33 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances (meters): ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: FMN0285
Location: FARMINGTON WBAN: 23090 HDR: 0285 CODE: FMN SET#: STAR03

Temperature: 9.9 °C Lid Height: 538 m Rainfall: 29.7 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	5.3E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.2E+2					

____ Additional Source Term Attached
Comments: 7 pCi/m^2-sec release rate per comments; area changed per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Bear Creek Location: Douglas, Wyoming

X Population Run JCL File Name: MILLLIC.20(BEARCREK)
____ Array Attached Pop. File Name: BEARCREK
Latitude: 43 ° 16 ' 11 " Longitude: 105 ° 37 ' 46 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: CPR1564
Location: CASPER WBAN: 24089 HDR: 1564 CODE: CPR SET#: STAR07

Temperature: 7.3 °C Lid Height: 533 m Rainfall: 30.5 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	3.6E+5					

Plume Rise:

____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.3E+2					

____ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation in progress; day/night met data corrected; area changed per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Moab Location: Moab, Utah

X Population Run JCL File Name: MILLLIC.20(MOABATLA)
____ Array Attached Pop. File Name: MOABATLA
Latitude: 38 ° 35 ' 59 " Longitude: 109 ° 35 ' 44 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: GJT0476
Location: GRAND JUNCTION WBAN: 23066 HDR: 0476 CODE: GJT SET#: STAR03

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.95E+3					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3.8E+2					

____ Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation in progress.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Sherwood Location: Wellpinit, Washington

X Population Run JCL File Name: MILLLIC.20(WELLPINI)
____ Array Attached Pop. File Name: WELLPINI
Latitude: 47 ° 52 ' 27 " Longitude: 118 ° 07 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: GEG0360
Location: SPOKANE WBAN: 24157 HDR: 0360 CODE: GEG SET#: STAR03

Temperature: 8.4 °C Lid Height: 640 m Rainfall: 31.7 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	3.2E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.0E+2					

____ Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate; area change per comments, 0-5 km demography verified.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Church Rock Location: Church Rock, N.M.

X Population Run JCL File Name: MILLLIC.20(CHURCHRO)
Array Attached Pop. File Name: CHURCHRO
Latitude: 35 ° 38 ' 47 " Longitude: 108 ° 30 ' 08 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GUP1167
Location: GALLUP/SEN WBAN: 23081 HDR: 1167 CODE: GUP SET#: STAR03

Temperature: 10.3 °C Lid Height: 767 m Rainfall: 30.3 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 4.05E+5

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.6E+2					

Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; reclamation in progress; 0-5 km demography updated.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Anaconda Location: Bluewater, N.M.

X Population Run JCL File Name: MILLLIC.20(BLUEWATE)
____ Array Attached Pop. File Name: BLUEWATE
Latitude: 35 ° 16 ' 12 " Longitude: 107 ° 56 ' 44 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: (meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARANHM
Location: AMBROSIA LAKE WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 13.4 °C Lid Height: 767 m Rainfall: 20.6 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.23E+6					

Plume Rise:

___Buoyant (cal/s):							
___Momentum (m/s):							
___Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			7.8E+2					

____ Additional Source Term Attached

Comments: 20 pCi/m^2-sec release rate; area changed per comments; met data changed to Ambrosia Lake; 0-5 km demography updated; reclamation in progress.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Dawn Location: Ford, Washington

X Population Run JCL File Name: MILLLIC.20(DAWNMILL)
Array Attached Pop. File Name: DAWNMILL
Latitude: 47 ° 54 ' 06 " Longitude: 117 ° 49 ' 58 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	40,000	60,000
	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: GEG0360
Location: SPOKANE WBAN: 24157 HDR: 0360 CODE: GEG SET#: STAR03

Temperature: 8.4 °C Lid Height: 640 m Rainfall: 42.4 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 5.18E+5

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Rn-222			1.6E+2

Additional Source Term Attached
Comments: 10 pCi/m^2-sec release rate per comments; reclamation in progress; 0-5 km demography verified.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Licensed @ UMTRCA Page 1 of 1

Facility: Lucky Mc Location: Riverton, Wyoming

X Population Run JCL File Name: MILLLIC.20(GASLUCKY)
Array Attached Pop. File Name: GASLUCKY
Latitude: 42 ° 49 ' 55 " Longitude: 107 ° 37 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 40,000 60,000
(meters) 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: LND1100
Location: LANDER WBAN: 24021 HDR: 1100 CODE: LND SET#: STAR05

Temperature: 6.0 °C Lid Height: 608 m Rainfall: 22.9 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	8.9E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.2E+2					

Additional Source Term Attached
Comments: 20 pCi/m^2-sec release rate; day/night met data corrected; area changed per comments.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989
Source Category: DOE Radon
Page 1 of 1

Facility: Monticello U-Mill Tailings
Location: Monticello, UT

X Population Run JCL File Name:
Array Attached Pop. File Name:
Latitude: 37 ° 50 ' 00 " Longitude: 109 ° 20 ' 00 "

Distances:	400	800	1,600	3,200	4,800	6,400	8,000	9,600	11,200	12,800
(meters)	15,000	20,000	25,000	30,000	35,000	40,000	50,000	60,000	70,000	80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMN1282
Location: WBAN: 23040 HDR: 1282 CODE: FMN SET#: STAR06

Temperature: 20 °C Lid Height: 1870 m Rainfall: 35 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 2.2E+5

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Rn-222 1.6E+3

Comments: Source area corrected per DOE comment.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: Monticello U-Mill Tailings Location: Monticello, UT

X Population Run JCL File Name:

Array Attached Pop. File Name:

Latitude: 37 ° 50 ' 00 " Longitude: 109 ° 20 ' 00 "

Distances:	400	800	1,600	3,200	4,800	6,400	8,000	9,600	11,200	12,800
(meters)	15,000	20,000	25,000	30,000	35,000	40,000	50,000	60,000	70,000	80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMN1282

Location: WBAN: 23040 HDR: 1282 CODE: FMN SET#: STAR06

Temperature: 20 °C Lid Height: 1870 m Rainfall: 35 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.2E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.4E+2					

Comments: Source area corrected per DOE comment; Ci/yr based on 20 pCi/m^2/sec.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: FMPC-Radon Location: Fernald, OH

X Population Run JCL File Name:

Array Attached Pop. File Name:

Latitude: 39 ° 10 ' 00 " Longitude: 84 ° 50 ' 00 "

Distances:	1,600	3,200	4,800	6,400	8,000	16,000	32,000	40,000	50,000	60,000
(meters)	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: FMPC

Location: WBAN: HDR: CODE: SET#:

Temperature: 15 °C Lid Height: 1000 m Rainfall: 85 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	6.1					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.3E+2					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1E+1					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: FMPC-Radon Location: Fernald, OH

X Population Run JCL File Name: ______

______ Array Attached Pop. File Name: ______

Latitude: 39 ° 10 ' 00 " Longitude: 84 ° 50 ' 00 "

Distances: (meters)	1,600	3,200	4,800	6,400	8,000	16,000	32,000	40,000	50,000	60,000
	80,000									

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run JCL File Name: ______

Distances: (meters) ______

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: FMPC

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 15 °C Lid Height: 1000 m Rainfall: 85 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	6.1					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.3E+2					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.9E-1					

Comments: Ci/yr based on 20 pCi/m^2/sec.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: Weldon Springs Storage Site Location: Weldon Spring, MO

X **Population Run** JCL File Name DOERN(WELDON2P)

Array Attached Pop. File Name: (WELDON)

Latitude: ° ' " Longitude: ° ' "

Distances:	100	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	70,000	80,000					

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARB

Location: WBAN: HDR: CODE: SET#:

Temperature: 13 °C Lid Height: 950 m Rainfall: 85 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X **Area Source:**

Circular Area (m^2):	3.4E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	**Class**	**AMAD**	**Release Rates (Ci/yr)**					
Rn-222			2.9E+1					

Comments: Run using only Rn-222 release rate.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: Weldon Springs Quarry Location: Weldon Springs, MO

X Population Run JCL File Name: DOERN(WELDON3) SHOULD THERE BE A "P"?
___ Array Attached Pop. File Name: WELDON
Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Distances:	100	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000
(meters)	40,000	50,000	60,000	80,000						

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: ___
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 13 °C Lid Height: 950 m Rainfall: 85 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.2E+5					

Plume Rise:
___ Buoyant (cal/s):
___ Momentum (m/s):
___ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.4E+1					

Comments: Run using only Rn-222 release rate.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 Source Category: DOE Radon Page 1 of 1

Facility: Niagara Falls Storage Site Location: Niagara Falls, NY

X Population Run JCL File Name: DOERN(IWCF2P)
___ Array Attached Pop. File Name: (IWCF)
Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Distances (meters): 1,000 2,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 70,000
80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances (meters): ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: (IAG0905)
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 8.9°C Lid Height: 945 m Rainfall: 80 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:						
Circular Area (m^2):	1.3E+5					

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.5E-1					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989　Source Category: DOE Radon　Page 1 of 1

Facility: Middlesex Sampling Plant　Location: Middlesex, NJ

X Population Run　JCL File Name: DOERN(MIDSTORP)
___ Array Attached　Pop. File Name: MIDNJ
Latitude: ___° ___' ___"　Longitude: ___° ___' ___"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run　JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached　STAR File Name: NEL0505
Location: ___　WBAN: ___　HDR: ___　CODE: ___　SET#: ___

Temperature: ___°C　Lid Height: ___m　Rainfall: ___cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.0E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2.5E+1					

Comments: Ci/yr based on 40 pCi/m^2/sec per DOE comment.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: June 1989 **Source Category:** DOE Radon **Page** 1 **of** 1

Facility: Middlesex Sampling Plant **Location:** Middlesex, NJ

X **Population Run** **JCL File Name:** DOERN(MIDSTORP)
___ **Array Attached** **Pop. File Name:** MIDNJ
Latitude: ___° ___' ___" **Longitude:** ___° ___' ___"

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ **Individual Run** **JCL File Name:**

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ **Array Attached** **STAR File Name:** NEL0505
Location: ___ **WBAN:** ___ **HDR:** ___ **CODE:** ___ **SET#:** ___

Temperature: ___ °C **Lid Height:** ___ m **Rainfall:** ___ cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.0E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1.3E+1					

Comments: Ci/yr based on 20 pCi/m^2/sec.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Underground U Mine   Page 1 of 1

Facility: Schwartzwalder U Mine   Location: 13 km NW of Golden, CO

X Population Run JCL File Name: UUMINERN(SCHWARTP)
Array Attached Pop. File Name: POPLIB(SCHWARTZ)
Latitude: 39 ° 50 ' 38 " Longitude: 105 ° 16 ' 52 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(DEN0618)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 510 m Rainfall: 40 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0	1.0				
Diameter (m):		2.8				
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	0	7.82				
Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			4,900	1,480				

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Section 23 Location: 50 Km N of Grants, NM

X Population Run JCL File Name: UUMINERN(SECT23P)

Array Attached Pop. File Name: POPLIB(SECT23)

Latitude: 35 ° 25 ' 47 " Longitude: 107 ° 52 ' 19 "

Distances:	500	1,000	2,000	3,000	4,000	5,400	5,600	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(GNT1246)

Location: WBAN: HDR: CODE: SET#:

Temperature: 14 °C Lid Height: 800 m Rainfall: 20 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	2.0	2.0	2.0	2.0	2.0	
Diameter (m):	1.5	1.2	1.5	0.88	1.5	
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	12.6	9.4	9.3	22.8	5.2	

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5,290	985	1,580	658	380	

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Mt. Taylor Location: 50 Km NE of Grants, NM

X Population Run JCL File Name: UUMINERN(MTAYLORP)
____ Array Attached Pop. File Name: POPLIB(MTAYLOR)
Latitude: 35 ° 11 ' 41 " Longitude: 107 ° 35 ' 08 "

Distances:	600	800	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: ____
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 14 °C Lid Height: 800 m Rainfall: 20 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	20.0					
Diameter (m):	7.0					

____ Area Source:						
Circular Area (m^2):						

Plume Rise:

X Buoyant (cal/s):	1.3E6						
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2,180					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Underground U Mine   Page 1 of 1

Facility: Pinenut Breccia-pipe mine   Location: 53 Km SSW of Fredonia, AZ

X Population Run JCL File Name: UUMINES(PINENUTP)

___ Array Attached Pop. File Name: POPLIB(PINENUT)

Latitude: 36 ° 30 ' 0 "   Longitude: 112 ° 44 ' 0 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	12,900	13,100	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___

(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(LSV0658)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 19 °C Lid Height: 500 m Rainfall: 10 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

___ Area Source:

Circular Area (m^2): ___

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			350					

___ Additional Source Term Attached

Comments: Location of max. individual is 53 Km NNE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Pigeon Breccia-pipe mine Location: 24 Km S of Fredonia, AZ

X Population Run JCL File Name: UUMINERN(PIGEONP)

___ Array Attached Pop. File Name: POPLIB(PIGEON)

Latitude: 36 ° 44 ' 0 " Longitude: 112 ° 32 ' 0 "

Distances:	500	1,000	2,000	3,800	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(LSV0658)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 19 °C Lid Height: 500 m Rainfall: 10 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

___ Area Source:

Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2,560					

___ Additional Source Term Attached

Comments: Location of max. individual is 24 Km N.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Underground U Mine   Page 1 of 1

Facility: Kanab North Breccia-pipe mine   Location: 30 Km SSW of Fredonia, AZ

X Population Run   JCL File Name: UUMINERN(KANABNP)
___ Array Attached   Pop. File Name: POPLIB(KANABN)
Latitude: 36 ° 44 ' 0 "   Longitude: 112 ° 38 ' 0 "

Distances:	500	1,000	2,000	3,100	3,300	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run   JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: STARLIB(LSV0658)
Location: ___   WBAN: ___   HDR: ___   CODE: ___   SET#: ___

Temperature: 19 °C   Lid Height: 500 m   Rainfall: 10 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
___ Area Source:						
Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			1,640					

___ Additional Source Term Attached
Comments: Location of max. individual is 30 m NNE.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Calliham Mine Location: Near Egnar, CO

X Population Run JCL File Name: UUMINERN(CALLIHMP)
Array Attached Pop. File Name: POPLIB(CALLIHM)
Latitude: 37 ° 55 ' 30 " Longitude: 109 ° 01 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
Area Source:						
Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):							
X Momentum (m/s):	20						
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			260					

Additional Source Term Attached
Comments: Max. individual at 0.5 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Deremo-Snyder Location: Near Egnar, CO

X Population Run JCL File Name: UUMINERN(DERMOP)
___ Array Attached Pop. File Name: POPLIB(DERMO)
Latitude: 37 ° 55 ' 30 " Longitude: 109 ° 01 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

	1	2	3	4	5	6
X Stack Source:						
Height (m):	1.0					
Diameter (m):						
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	20					

	A	B	C	D	E	F	G
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			960					

___ Additional Source Term Attached
Comments: Max. individual at 0.8 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Underground U Mine   Page 1 of 1

Facility: King Solomon Mine   Location: Near Egnar, CO

X Population Run JCL File Name: UUMINERN(KINGSOLP)

___ Array Attached Pop. File Name: POPLIB(KINGSOL)

Latitude: 38 ° 23 ' 00 " Longitude: 108 ° 47 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(GJT0476)

Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
___ Area Source: Circular Area (m^2):						

Plume Rise:

___ Buoyant (cal/s):							
X Momentum (m/s):	20						
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2,020					

___ Additional Source Term Attached

Comments: Max. individual at 4 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: La Sal Mine Location: Near La Sal, UT

X Population Run JCL File Name: UUMINERN(LASALP)

___ Array Attached Pop. File Name: POPLIB(LASAL)

Latitude: 38 ° 15 ' 45 " Longitude: 109 ° 15 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(GJT0476)

Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
___ Area Source:						
Circular Area (m^2):						
Plume Rise:						
___ Buoyant (cal/s):						
X Momentum (m/s):	20					
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2,460					

___ Additional Source Term Attached

Comments: Max. individual at 0.8 km W. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Nil Mine Location: In Paradox Valley, CO

X Population Run JCL File Name: UUMINERN(NILP)
____ Array Attached Pop. File Name: POPLIB(NIL)
Latitude: 38 ° 21 ' 36 " Longitude: 108 ° 03 ' 12 "

Distances (meters): 500 1,300 1,500 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances (meters): ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: ____

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
____ Area Source: Circular Area (m^2):						
Plume Rise:						
____ Buoyant (cal/s):						
X Momentum (m/s):	20					

____ Entered (m): ____ ____ ____ ____ ____ ____ ____
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			690					

____ Additional Source Term Attached
Comments: Max. individual at 6.3 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Snowball-Pandora Mine Location: East of La Sal, UT

X Population Run JCL File Name: UUMINERN(SNOWBP)
Array Attached Pop. File Name: POPLIB(SNOWB)
Latitude: 38 ° 15 ' 45 " Longitude: 109 ° 15 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
Area Source: Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	20					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			2,920					

Additional Source Term Attached
Comments: Max. individual at 2 km W. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Sunday Mine Location: South of Naturita, CO

X Population Run JCL File Name: UUMINERN(SUNDYWP)
____ Array Attached Pop. File Name: POPLIB(SUNDY)
Latitude: 38 ° 04 ' 30 " Longitude: 108 ° 48 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#: ____

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
____ Area Source: Circular Area (m^2):						
Plume Rise:						
____ Buoyant (cal/s):						
X Momentum (m/s):	20					

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			3,120					

____ Additional Source Term Attached
Comments: Max. individual at 6.3 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Wilson-Silverbell Mine Location: Near Egnar, CO

X Population Run JCL File Name: UUMINERN(WILSONP)
Array Attached Pop. File Name: POPLIB(WILSON)
Latitude: 37 ° 55 ' 30 " Longitude: 109 ° 01 ' 00 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(GJT0476)
Location: Grand Junction WBAN: 23066 HDR: 0476 CODE: GJT SET#:

Temperature: 13.7 °C Lid Height: 538 m Rainfall: 20.3 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
Area Source:						
Circular Area (m^2):						
Plume Rise:						
Buoyant (cal/s):						
X Momentum (m/s):	20					

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			790					

Additional Source Term Attached
Comments: Max. individual at 2.0 km. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Underground U Mine Page 1 of 1

Facility: Sheep Mountain #1 Location: 12 km S of Jeffrey City, WY

X Population Run JCL File Name: UUMINERN( )

Array Attached Pop. File Name: POPLIB( )

Latitude: 42 ° 23 ' 02 " Longitude: 107 ° 48 ' 53 "

Distances:	500	1,300	1,500	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB( )

Location: WBAN: HDR: CODE: SET#:

Temperature: 7.0 °C Lid Height: 600 m Rainfall: 25 cm/yr

X Stack Source:	1	2	3	4	5	6
Height (m):	2.0					
Diameter (m):						
Area Source:						
Circular Area (m^2):						

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			170					

Additional Source Term Attached

Comments: Max. individual at 5.2 km NW. New run.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Johnson Mine Location: Moffat County, CO

X Population Run JCL File Name: JOHNMNEP
Array Attached Pop. File Name: JOHNSMIN
Latitude: 40 ° 32 ' 40 " Longitude: 107 ° 59 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8°C Lid Height: 1000 m Rainfall: 35.56 cm/yr

	1	2	3	4	5	6
Stack Source:						
Height (m):						
Diameter (m):						

X Area Source:
Circular Area (m^2): 161840

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			52.4					

Additional Source Term Attached
Comment: Day/night data set corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Sage Mine Location: Moffat County, CO

X Population Run JCL File Name: SAGEP

___ Array Attached Pop. File Name: SAGE

Latitude: 40 ° 34 ' 00 " Longitude: 107 ° 58 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: EEE1420

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 11.8 °C Lid Height: 1000 m Rainfall: 35.56cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	170800					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			239.1					

___ Additional Source Term Attached

Comment: Day/night data set corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Rob Mine Location: Moffat County, CO

X Population Run JCL File Name: ROBMINEP
Array Attached Pop. File Name: ROBMINE
Latitude: 40 ° 32 ' 50 " Longitude: 108 ° 00 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8 °C Lid Height: 1000 m Rainfall: 35.56cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	735020					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			501.7					

Additional Source Term Attached
Comment: Day/night data set corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Marge 1-3 Mine Location: Moffat County, CO

X Population Run JCL File Name: MARGE13P
Array Attached Pop. File Name: MARGE13
Latitude: 40 ° 33 ' 00 " Longitude: 107 ° 59 ' 00 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8°C Lid Height: 1000 m Rainfall: 35.56 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	134705					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			167.9					

Additional Source Term Attached
Comment: Day/night data set corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Gert 4-7 Mine Location: Moffat County, CO

X Population Run JCL File Name: GERT47P
Array Attached Pop. File Name: GERT47
Latitude: 40° 35' 50" Longitude: 107° 58' 15"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8°C Lid Height: 1000 m Rainfall: 35.56 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	304712					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			476.1					

Additional Source Term Attached
Comment: Day/night data set corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Freeze Out Mine Location: Custer County, SD

X Population Run JCL File Name: FREZOUTP
Array Attached Pop. File Name: FREZEOUT
Latitude: 43° 28' 45" Longitude: 103° 57' 00"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: RAP0336
Location: WBAN: HDR: CODE: SET#:

Temperature: 8.2°C Lid Height: 1000 m Rainfall: 48.26 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	58065					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			16.85					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #5 Location: Fall River County, SD

X Population Run JCL File Name: DARPIT5P

____ Array Attached Pop. File Name: FRCPIT5

Latitude: 43 ° 28 ' 29 " Longitude: 103 ° 57 ' 25 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: RAP0336

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 8.2 °C Lid Height: 1000 m Rainfall: 48.26 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	241342					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			32.30					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #4 Location: Fall River County, SD

X Population Run JCL File Name: DARPIT4P
____ Array Attached Pop. File Name: DARPIT4
Latitude: 43 ° 28 ' 30 " Longitude: 103 ° 57 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: RAP0336
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 8.2°C Lid Height: 1000 m Rainfall: 48.26cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	70374					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.9					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #2 & #3 Location: Fall River County, SD

X Population Run JCL File Name: DARPT23P
___ Array Attached Pop. File Name: DARPIT23
Latitude: 43 ° 28 ' 15 " Longitude: 103 ° 57 ' 10 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: RAP0336
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 8.2°C Lid Height: 1000 m Rainfall: 46.26 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	119613					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			12.3					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #1 Location: Fall River County, SD

X Population Run JCL File Name: DARPIT1P
Array Attached Pop. File Name: FRCPIT1
Latitude: 43 ° 28 ' 00 " Longitude: 103 ° 57 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: RAP0336
Location: WBAN: HDR: CODE: SET#:

Temperature: 8.2°C Lid Height: 1000 m Rainfall: 48.26cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	58297					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.4					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Lucky Mac 4X 4P Location: Fremont County, WY

X Population Run JCL File Name: LUCKM4XP
Array Attached Pop. File Name:
Latitude: 42 ° 47 ' 50 " Longitude: 107 ° 34 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CPR1179
Location: WBAN: HDR: CODE: SET#:

Temperature: 9.8°C Lid Height: 1000 m Rainfall: 28.5 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			140					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Lucky Mac "7" Pits Location: Fremont County, WY

X Population Run JCL File Name: LUCKYMP
______ Array Attached Pop. File Name: LUCKYMAC
Latitude: 42 ° 47 ' 50 " Longitude: 107 ° 35 ' 20 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: CPR1179
Location: WBAN: HDR: CODE: SET#:

Temperature: 9.8°C Lid Height: 1000 m Rainfall: 28.5 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.4E+6					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			373					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Lucky Mac West Gas Hills Location: Fremont County, WY

X Population Run JCL File Name: LCKMACWP

___ Array Attached Pop. File Name: LUCKMACW

Latitude: 42 ° 46 ' 08 " Longitude: 107 ° 39 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: CPR1179

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 9.8°C Lid Height: 1000 m Rainfall: 28.5 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	7.08E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			150					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Morton Ranch #1704 Location: Converse County, WY

X Population Run JCL File Name: MORTONRP

Array Attached Pop. File Name: MORTONRH

Latitude: 43 ° 14 ' 00 " Longitude: 105 ° 37 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CPR1179

Location: WBAN: HDR: CODE: SET#:

Temperature: 9.8°C Lid Height: 1000 m Rainfall: 28.5 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.59E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			114					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Surface U Mine   Page 1 of 1

Facility: Ramco #20, #22   Location: Coconino County, AZ

X Population Run   JCL File Name: RAMCO22P
______ Array Attached   Pop. File Name: RAMCOEST
Latitude: 35 ° 45 ' 00 "   Longitude: 111 ° 18 ' 00 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

______ Individual Run   JCL File Name: ______

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached   STAR File Name: INW0314
Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 12.6°C   Lid Height: 1000 m   Rainfall: 15.7 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	102367					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			59					

______ Additional Source Term Attached
Comments: ______

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Jack Daniels #1 Location: Coconino County, AZ

X Population Run JCL File Name: JACKDN1P

___ Array Attached Pop. File Name: JACKDAN1

Latitude: 35 ° 54 ' 00 " Longitude: 111 ° 24 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: INW0314

Location: WBAN: HDR: CODE: SET#:

Temperature: 12.6°C Lid Height: 1000 m Rainfall: 15.7 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2): 23848

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			13.86					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 **Source Category:** Surface U Mine **Page** 1 **of** 1

Facility: Yazzie #2 **Location:** Coconino County, AZ

X **Population Run** JCL File Name: YAZZLEZP
Array Attached Pop. File Name: YAZZLEZ
Latitude: 35 ° 44 ' 00 " **Longitude:** 111 ° 18 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: INW0314
Location: WBAN: HDR: CODE: SET#:

Temperature: 12.6°C **Lid Height:** 1000 m **Rainfall:** 15.7 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X **Area Source:**

Circular Area (m^2):	16082					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			6.46					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Ramco #21 East Location: Coconino County, AZ

X Population Run JCL File Name: RAMCOESP
Array Attached Pop. File Name: RAMCOEST
Latitude: 35 ° 45 ' 00 " Longitude: 111 ° 18 ' 00 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: INW0314
Location: WBAN: HDR: CODE: SET#:

Temperature: 12.6 °C Lid Height: 1000 m Rainfall: 15.7 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	13532					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.74					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Surface U Mine   Page 1 of 1

Facility: Wright-McCrady   Location: Atascosa County, TX

X Population Run JCL File Name: WMCRADY
___ Array Attached Pop. File Name: WMCCRADY
Latitude: 28 ° 49 ' 20 " Longitude: 98 ° 07 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064
Location: WBAN: HDR: CODE: SET#:

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	424700					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			64.6					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Stoeltje Location: Karnes County, TX

X Population Run JCL File Name: STOELTEP
____ Array Attached Pop. File Name: STOELTGE
Latitude: 28 ° 56 ' 05 " Longitude: 98 ° 00 ' 35 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: SAT0064
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	151547					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			7.19					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Manka Location: Karnes County, TX

X Population Run JCL File Name: MANKAP

___ Array Attached Pop. File Name: MANKA

Latitude: 28 ° 56 ' 05 " Longitude: 98 ° 01 ' 50 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064

Location: WBAN: HDR: CODE: SET#:

Temperature: 21.61 °C Lid Height: 1000 m Rainfall: 72.52 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	183948					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			15.09					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Surface U Mine   Page 1 of 1

Facility: Swientek   Location: Karnes County, TX

X Population Run JCL File Name: SWENTEKP

___ Array Attached Pop. File Name: SWIENTEK

Latitude: 28° 52' 30" Longitude: 98° 00' 00"

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	576928					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			5.08					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Kopplin Location: Live Oak County, TX

X Population Run JCL File Name: KOPPLINP

____ Array Attached Pop. File Name: KOPPLIN

Latitude: 29 ° 50 ' 00 " Longitude: 98 ° 03 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: SAT0064

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	77575					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			11.9					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Jack Huskon #3 Location: Coconino County, AZ

X Population Run JCL File Name: HUSKON3P
Array Attached Pop. File Name: HUSKON3
Latitude: 35 ° 49 ' 30 " Longitude: 111 ° 20 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: INW0314
Location: WBAN: HDR: CODE: SET#:

Temperature: 12.6 °C Lid Height: 1000 m Rainfall: 15.7 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	27166					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			15.97					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Surface U Mine   Page 1 of 1

Facility: Evans Huskon #35   Location: Coconino County, AZ

X Population Run JCL File Name: EVHSK35P
____ Array Attached Pop. File Name: EVHUSK35
Latitude: 35 ° 47 ' 00 " Longitude: 111 ° 17 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: INW0314
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 12.6°C Lid Height: 1000 m Rainfall: 15.7 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2887					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			0.2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Shirley Basin Location: Carbon County, WY

X Population Run JCL File Name: SHBASMNP
Array Attached Pop. File Name: SHBASMIN
Latitude: ° ' " Longitude: ° ' "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: CPR1179
Location: CASPER WBAN: 24089 HDR: 1179 CODE: CPR SET#: SET06

Temperature: 10.0°C Lid Height: 1500 m Rainfall: 29.0 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	3.24E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			920.					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: Surface U Mine   Page 1 of 1

Facility: Rhode Ranch Mine   Location: Rhone Ranch, TX

X Population Run   JCL File Name: RHRCHMNP
___ Array Attached   Pop. File Name: RHRCHMIN
Latitude: ___ ° ___ ' ___ "   Longitude: ___ ° ___ ' ___ "

Distances: 500   1,000   2,000   3,000   4,000   5,000   10,000   20,000   30,000   40,000
(meters) 50,000   60,000   70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run   JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: SAT0064
Location: SAN ANTONIO   WBAN: 12921   HDR: 0064   CODE: SAT   SET#: SET01

Temperature: 22.0°C   Lid Height: 900 m   Rainfall: 73.0 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.10E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222			40					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Wright-McCrady Location: Atascosa County, TX

X Population Run JCL File Name: WMCRADYP
____ Array Attached Pop. File Name: WMCCRADY
Latitude: 28 ° 49 ' 20 " Longitude: 98 ° 07 ' 45 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: SAT0064
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						
X Area Source:						
Circular Area (m^2):	424700					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	4.0E-3					
U-234	Y	3.0	4.0E-3					
Th-230	Y	3.0	4.0E-3					
Ra-226	W	3.0	4.0E-3					
Pb-210	D	3.0	4.0E-3					
Po-210	W	3.0	4.0E-3					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Stoeltje Location: Karnes County, TX

X Population Run JCL File Name: STOELEP
___ Array Attached Pop. File Name: STOELTGE
Latitude: 28 ° 56 ' 05 " Longitude: 98 ° 00 ' 35 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: SAT0064
Location: WBAN: HDR: CODE: SET#:

Temperature: 21.61°C Lid Height: 1000 m Rainfall: 72.52cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	151547					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	3.2E-4					
U-234	Y	3.0	3.2E-4					
Th-230	Y	3.0	3.2E-4					
Ra-226	W	3.0	3.2E-4					
Pb-210	D	3.0	3.2E-4					
Po-210	W	3.0	3.2E-4					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Ramco 21 East Location: Coconino County, AZ

X Population Run JCL File Name: RAMCOESP
____ Array Attached Pop. File Name: RAMCOEST
Latitude: 35 ° 45 ' 00 " Longitude: 111° 18 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____
(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: INW0314
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 12.6 °C Lid Height: 1000 m Rainfall: 15.7 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	13357					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.44E-4					
U-234	Y	3.0	1.44E-4					
Th-230	Y	3.0	1.44E-4					
Ra-226	W	3.0	1.44E-4					
Pb-210	D	3.0	1.44E-4					
Po-210	W	3.0	1.44E-4					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Lucky Mac "7" Pits Location: Fremont County, WY

X Population Run JCL File Name: LUCKYMP
___ Array Attached Pop. File Name: LUCKYMAC
Latitude: 42 ° 47 ' 50 " Longitude: 107 ° 35 ' 20 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: CPR1179
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 9.8 °C Lid Height: 1000 m Rainfall: 28.5 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+6					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.6E-1					
U-234	Y	3.0	1.6E-1					
Th-230	Y	3.0	1.6E-1					
Ra-226	W	3.0	1.6E-1					
Pb-210	D	3.0	1.6E-1					
Po-210	W	3.0	1.6E-1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Morton Ranch 1704 Location: Converse County, WY

X Population Run JCL File Name: MORTONRP
____ Array Attached Pop. File Name: MORTONRH
Latitude: 42 ° 47 ' 50 " Longitude: 107 ° 34 ' 40 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: CPR1179
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 9.8 °C Lid Height: 1000m Rainfall: 28.5 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.6E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	2.8E-2					
U-234	Y	3.0	2.8E-2					
Th-230	Y	3.0	2.8E-2					
Ra-226	W	3.0	2.8E-2					
Pb-210	D	3.0	2.8E-2					
Po-210	W	3.0	2.8E-2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #1 Location: Fall River County, SD

X Population Run JCL File Name: DARPIT1P
____ Array Attached Pop. File Name: FRCPIT1
Latitude: 43 ° 28 ' 00 " Longitude: 103 ° 57 ' 00 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: ____
(meters) ____

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: RAP0336
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 8.2 °C Lid Height: 1000 m Rainfall: 48.26 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	58297					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.88E-3					
U-234	Y	3.0	1.88E-3					
Th-230	Y	3.0	1.88E-3					
Ra-226	W	3.0	1.88E-3					
Pb-210	D	3.0	1.88E-3					
Po-210	W	3.0	1.88E-3					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Darrow Pit #5 Location: Fall River County, SD

X Population Run JCL File Name: DARPIT5P
Array Attached Pop. File Name: FRCPIT5
Latitude: 43 ° 28 ' 29 " Longitude: 103 ° 57 ' 25 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: RAP0336
Location: WBAN: HDR: CODE: SET#:

Temperature: 8.2 °C Lid Height: 1000 m Rainfall: 48.26cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	241342					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	1.09E-2					
U-234	Y	3.0	1.09E-2					
Th-230	Y	3.0	1.09E-2					
Ra-226	W	3.0	1.09E-2					
Pb-210	D	3.0	1.09E-2					
Po-210	W	3.0	1.09E-2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Rob Mine Location: Moffat County, CO

X Population Run JCL File Name: ROBMINEP
Array Attached Pop. File Name: ROBMINE
Latitude: 40 ° 32 ' 50 " Longitude: 108 ° 00 ' 00 "

Distances (meters): 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 70,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8 °C Lid Height: 1000 m Rainfall: 35.56cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	735020					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	7.33E-3					
U-234	Y	3.0	7.33E-3					
Th-230	Y	3.0	7.33E-3					
Ra-226	W	3.0	7.33E-3					
Pb-210	D	3.0	7.33E-3					
Po-210	W	3.0	7.33E-3					

Additional Source Term Attached
Comment: Day/night data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Johnson Mine Location: Moffat County, CO

X Population Run JCL File Name: JOHNMNEP
Array Attached Pop. File Name: JOHNSMIN
Latitude: 40 ° 32 ' 40 " Longitude: 107 ° 59 ' 30 "

Distances:	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	70,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:				X	
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: EEE1420
Location: WBAN: HDR: CODE: SET#:

Temperature: 11.8 °C Lid Height: 1000 m Rainfall: 35.56 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):						
Diameter (m):						

X Area Source:

Circular Area (m^2):	161840					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	3.0	6.69E-4					
U-234	Y	3.0	6.69E-4					
Th-230	Y	3.0	6.69E-4					
Ra-226	W	3.0	6.69E-4					
Pb-210	D	3.0	6.69E-4					
Po-210	W	3.0	6.69E-4					

Additional Source Term Attached
Comment: Day/night data corrected.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Surface U Mine Page 1 of 1

Facility: Jack Huskon #3 Location: Coconino County, AZ

X Population Run JCL File Name: HUSKON3P
___ Array Attached Pop. File Name: HUSKON3
Latitude: 35 ° 49 ' 30 " Longitude: 111 ° 20 ' 00 "

Distances: 500 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 70,000

Food Fractions: F1-Grown at Home F2-Grown Regionally F3-Imported Urban/Low Productivity Rural
Meat: ___ ___ ___
Milk: ___ ___ ___ X ___
Vegetables: ___ ___ ___

___ Individual Run JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions: F1-Grown at Home F2-Grown Regionally F3-Imported Urban/Low Productivity Rural
Meat: ___ ___ ___
Milk: ___ ___ ___ ___ ___
Vegetables: ___ ___ ___

Meteorological (STAR) Data: ___ Array Attached STAR File Name: INW0314
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 12.6 °C Lid Height: 1000 m Rainfall: 15.7 cm/yr

___ Stack Source: 1 2 3 4 5 6

Height (m): ___
Diameter (m): ___

X Area Source:
Circular Area (m^2): 27166

Plume Rise:
___ Buoyant (cal/s): ___
___ Momentum (m/s): ___
___ Entered (m): ___
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
U-238	Y	3.0	7.8E-4
U-234	Y	3.0	7.8E-4
Th-230	Y	3.0	7.8E-4
Ra-226	W	3.0	7.8E-4
Pb-210	D	3.0	7.8E-4
Po-210	W	3.0	7.8E-4

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: DISTRICHEM, INC. Location: HELENA, AR

X Population Run JCL File Name: PHOSGYP2(AR001P)
____ Array Attached Pop. File Name: POPLIB(AR001)
Latitude: 34 ° 28 ' 30 " Longitude: 90 ° 36 ' 00 "

Distances: 500 1,300 1,500 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(MEM0143)
Location: WBAN: HDR: CODE: SET#:

Temperature: 16 °C Lid Height: 600 m Rainfall: 125 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.0E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.2E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL001P)
Array Attached Pop. File Name: POPLIB(FL001)
Latitude: 27 ° 46 ' 20 " Longitude: 81 ° 55 ' 50 "

Distances:	500	1,000	2,000	3,000	4,700	4,900	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARC)
Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.5E+2					

Additional Source Term Attached
Comments: New base area provided by K. Johnson, TFI (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: ROYSTER PHOSPHATE, INC.   Location: PALMETTO, FL

X Population Run JCL File Name: PHOSGYP2(FL002P)

___ Array Attached Pop. File Name: POPLIB(FL002)

Latitude: 27 ° 37 ' 00 " Longitude: 82 ° 31 ' 00 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(TAMPA)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 800m Rainfall: 125 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.21E+6					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.2E+2					

___ Additional Source Term Attached

Comments: Location of max. individual 1,200 WSW per TFI comments on BID.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: BREWSTER PHOSPHATES Location: BRADLEY, FL

X Population Run JCL File Name: PHOSGYP2(FL003P)

___ Array Attached Pop. File Name: POPLIB(FL003)

Latitude: 27 ° 45 ' 00 " Longitude: 82 ° 57 ' 40 "

Distances:	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.0E+5					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	9.2E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: CF INDUSTRIES, INC. Location: PLANT CITY, FL

X Population Run JCL File Name: PHOSGYP2(FL004P)
Array Attached Pop. File Name: POPLIB(FL004)
Latitude: 28 ° 09 ' 40 " Longitude: 82 ° 08 ' 10 "

Distances:	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARC)
Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.62E+6					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.1E+2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: CF INDUSTRIES, INC.   Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL005P)

______ Array Attached Pop. File Name: POPLIB(FL005)

Latitude: 27 ° 52 ' 00 " Longitude: 81 ° 56 ' 20 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(STARC)

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.46E+6					

Plume Rise:

___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.4E+2					

______ Additional Source Term Attached

Comments: Location of max. indiv. 2,600 m NW; new stack status changes source term (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: CONSERV, INC., #1 Location: NICHOLS, FL

X Population Run JCL File Name: PHOSGYP2(FL006EP)

______ Array Attached Pop. File Name: POPLIB(FL006E)

Latitude: 27 ° 52 ' 33 " Longitude: 82 ° 01 ' 35 "

Distances:	500	1,000	1,200	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(STARC)

Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.2E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	5.8E+1					

______ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: CONSERV, INC., #2 Location: NICHOLS, FL

X Population Run JCL File Name: PHOSGYP2(FL006WP)

Array Attached Pop. File Name: POPLIB(FL006W)

Latitude: 27 ° 52 ' 33 " Longitude: 82 ° 01 ' 55 "

Distances:	500	1,000	1,200	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARC)

Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	3.1E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.1E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ESTECH, INC. Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL007P)
___ Array Attached Pop. File Name: POPLIB(FL007)
Latitude: 27 ° 47 ' 20 " Longitude: 81 ° 54 ' 00 "

Distances:	500	1,000	2,000	2,900	3,100	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.1E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.7E+1					

___ Additional Source Term Attached
Comments: New base area per Jo88c.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: FARMLAND INDUSTRIES, INC. Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL008P)
____ Array Attached Pop. File Name: POPLIB(FL008)
Latitude: 27 ° 50 ' 45 " Longitude: 81 ° 54 ' 45 "

Distances:	500	1,400	1,600	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARC)
Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.2E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.7E+2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: GARDINIER, INC. Location: TAMPA, FL

X Population Run JCL File Name: PHOSGYP2(FL009P)
___ Array Attached Pop. File Name: POPLIB(FL009)
Latitude: 27 ° 52 ' 20 " Longitude: 82 ° 23 ' 50 "

Distances: (meters)	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(TAMPA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 800m Rainfall: 125 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	1.38E+6					

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.1E+2					

___ Additional Source Term Attached
Comments: Location of max. individual 1600m E (per Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: Seminole Fertilizer Corp. #1 Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL010P)

____ Array Attached Pop. File Name: POPLIB(FL010)

Latitude 27 ° 54 ' 19 " Longitude: 81 ° 54 ' 45 "

Distances:	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARC)

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	6.4E+5					
Plume Rise:						
____ Buoyant (cal/s):						
____ Momentum (m/s):						

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.0E+2					

____ Additional Source Term Attached

Comments: Name of facility changed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: Seminole Fertilizer Corp. #2   Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL011P)

Array Attached Pop. File Name: POPLIB(FL011)

Latitude: 27 ° 53 ' 13 " Longitude: 81 ° 53 ' 38 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARC)

Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

	1	2	3	4	5	6
Stack Source:						
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.27E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.0E+2					

Additional Source Term Attached

Comments: New base area; Location of max. individual is 1200 NNE (per TFI comments on BID).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: IMC CORPORATION Location: MULBERRY, FL

X Population Run JCL File Name: PHOSGYP2(FL012P)

___ Array Attached Pop. File Name: POPLIB(FL012)

Latitude: 27 ° 49 ' 50 " Longitude: 82 ° 02 ' 23 "

Distances:	500	1,000	2,000	3,000	3,900	4,100	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.57E+6					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.9E+2					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: OCCIDENTAL CHEMICAL CO. SWAN.#1 Location: WHITE SPRINGS, FL

X Population Run JCL File Name: PHOSGYP2(FL013P)
____ Array Attached Pop. File Name: POPLIB(FL013)
Latitude: 30 ° 26 ' 03 " Longitude: 82 ° 46 ' 44 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(TALLAHAS)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 20 °C Lid Height: 700m Rainfall: 156 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	4.0E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.6E+1					

____ Additional Source Term Attached
Comments: New flux values (Ro79, Ma82, J088d); Max. individual at 2800 m SSW (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: OCCIDENTAL CHEMICAL CO. SWAN.#2 Location: WHITE SPRINGS, FL

X Population Run JCL File Name: PHOSGYP2(FL014P)
Array Attached Pop. File Name: POPLIB(FL014)
Latitude: 30 ° 26 ' 49 " Longitude: 82 ° 47 ' 36 "

Distances:	500	1,800	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(TALLAHAS)
Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 156 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	4.0E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.5E+1					

Additional Source Term Attached
Comments: New flux values (Ro79, Ma82, J088d); Max. individual at 3000 m NW (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: OCCIDENTAL CHEMICAL CO. SWIFT Location: WHITE SPRINGS, FL

X Population Run JCL File Name: PHOSGYP2(FL015P)

Array Attached Pop. File Name: POPLIB(FL015)

Latitude: 30 ° 26 ' 42 " Longitude: 82 ° 52 ' 12 "

Distances:	500	1,200	1,400	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(TALLAHAS)

Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 156 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	5.3E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.3E+1					

Additional Source Term Attached

Comments: New flux value (Ro79, Ma82, J088d); Max. individual at 3200 m N (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ROYSTER CO. #1 Location: MULBERRY, FL

X Population Run JCL File Name: PHOSGYP2(FL016P)

___ Array Attached Pop. File Name: POPLIB(FL016)

Latitude: 27 ° 53 ' 30 " Longitude: 81 ° 56 ' 50 "

Distances:	500	900	1,100	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	3.0E+5					

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	6.2E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ROYSTER CO. #2 Location: MULBERRY, FL

X Population Run JCL File Name: PHOSGYP2(FL017P)

___ Array Attached Pop. File Name: POPLIB(FL017)

Latitude: 27 ° 53 ' 10 " Longitude: 81 ° 57 ' 20 "

Distances: (meters)	500	900	1,100	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

	1	2	3	4	5	6
___ Stack Source:						
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.8E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.3E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: USS AGRI-CHEMICALS, INC Location: BARTOW, FL

X Population Run JCL File Name: PHOSGYP2(FL018P)

___ Array Attached Pop. File Name: POPLIB(FL018)

Latitude: 27 ° 54 ' 15 " Longitude: 81 ° 52 ' 35 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

	1	2	3	4	5	6
___ Stack Source:						
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.0E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

	A	B	C	D	E	F	G
___ Entered (m):							
Pasquill Stability							

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	5.9E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: USS AGRI-CHEMICALS, INC. Location: FT. MEADE, FL

X Population Run JCL File Name: PHOSGYP2(FL019P)

____ Array Attached Pop. File Name: POPLIB(FL019)

Latitude: 27 ° 43 ' 55 " Longitude: 81 ° 51 ' 00 "

Distances:	500	900	1,100	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARC)

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 22 °C Lid Height: 1,000m Rainfall: 142 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source: Circular Area (m^2):	6.1E+5					
Plume Rise:						
____ Buoyant (cal/s):						
____ Momentum (m/s):						

____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.2E+2					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: NU-WEST, INDUSTRIES INC.   Location: CONDA, ID

X Population Run   JCL File Name: PHOSGYP2(ID001P)

___ Array Attached   Pop. File Name: POPLIB(ID001)

Latitude: 42 ° 44 ' 30 "   Longitude: 111 ° 32 ' 55 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run   JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: STARLIB(POCATELL)

Location: WBAN: HDR: CODE: SET#:

Temperature: 8 °C   Lid Height: 600m   Rainfall: 27 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.6E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	9.7E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: J.R. SIMPLOT CO. #1 Location: POCATELLO, ID

X Population Run JCL File Name: PHOSGYP2(ID002P)
Array Attached Pop. File Name: POPLIB(ID002)
Latitude: 42 ° 54 ' 20 " Longitude: 112 ° 31 ' 10 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(POCATELL)
Location: WBAN: HDR: CODE: SET#:

Temperature: 8 °C Lid Height: 600m Rainfall: 27 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	1.7E+5					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):
Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.3E+1					

Additional Source Term Attached
Comments: Location of max. individual 1200 m ENE (per Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: J.R. SIMPLOT CO. #2 Location: POCATELLO, ID

X Population Run JCL File Name: PHOSGYP2(ID003P)
____ Array Attached Pop. File Name: POPLIB(ID003)
Latitude: 42 ° 54 ' 10 " Longitude: 112 ° 31 ' 30 "

Distances:	500	1,200	1,400	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(POCATELL)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 8 °C Lid Height: 600m Rainfall: 27 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	8.1E+5					

Plume Rise:							
____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.7E+2					

____ Additional Source Term Attached
Comments: Location of max. individual 2000 m NE (per Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: BUNKER HILL CO. #1 Location: KELLOGG, ID

X Population Run JCL File Name: PHOSGYP2(ID004P)
______ Array Attached Pop. File Name: POPLIB(ID004)
Latitude: 47 ° 32 ' 30 " Longitude: 116 ° 10 ' 05 "

Distances: (meters)	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name:

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(MLP1448)
Location: WBAN: HDR: CODE: SET#:

Temperature: 8.5 °C Lid Height: 600m Rainfall: 44 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	2.0E+4					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	6.0E+0					

______ Additional Source Term Attached
Comments: Incorrect values used previously.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: BUNKER HILL CO. #2 Location: KELLOGG, ID

X Population Run JCL File Name: PHOSGYP2(ID005P)

___ Array Attached Pop. File Name: POPLIB(ID005)

Latitude: 47 ° 32 ' 50 " Longitude: 116 ° 10 ' 00 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(MLP1448)

Location: WBAN: HDR: CODE: SET#:

Temperature: 8.5 °C Lid Height: 600m Rainfall: 44 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	5.0E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.3E+1					

___ Additional Source Term Attached

Comments: Incorrect values used previously.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: BUNKER HILL CO. #3 Location: KELLOGG, ID

X Population Run JCL File Name: PHOSGYP2(ID006P)
Array Attached Pop. File Name: POPLIB(ID006)
Latitude: 47 ° 33 ' 00 " Longitude: 116 ° 10 ' 00 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(MLP1448)
Location: WBAN: HDR: CODE: SET#:

Temperature: 8.5 °C Lid Height: 600m Rainfall: 44 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.0E+5					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	5.0E+1					

Additional Source Term Attached
Comments: Incorrect values used previously.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ALLIED CHEMICAL CO. Location: E. ST. LOUIS, IL

X Population Run JCL File Name: PHOSGYP2(IL001P)
____ Array Attached Pop. File Name: POPLIB(IL001)
Latitude: 38 ° 39 ' 00 " Longitude: 90 ° 05 ' 10 "

Distances: 700 900 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARB)
Location: WBAN: HDR: CODE: SET#:

Temperature: 12 °C Lid Height: 600m Rainfall: 102 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	7.0E+4					

Plume Rise:

____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.9E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: BEKER INDUSTRIES CORP. Location: MARSEILLES, IL

X Population Run JCL File Name: PHOSGYP2(IL002P)
Array Attached Pop. File Name: POPLIB(IL002)
Latitude: 41 ° 19 ' 00 " Longitude: 88 ° 35 ' 51 "

Distances:	500	700	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PEORIA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.8E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.0E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: MOBIL CHEMICAL CO. Location: DEPUE, IL

X Population Run JCL File Name: PHOSGYP2(IL003P)
Array Attached Pop. File Name: POPLIB(IL003)
Latitude: 41 ° 20 ' 04 " Longitude: 89 ° 18 ' 04 "

Distances: 500 1,000 1,200 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PEORIA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	4.0E+5					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.5E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: NORTHERN PETROCHEMICAL CO. Location: MORRIS, IL

X Population Run JCL File Name: PHOSGYP2(IL004P)

____ Array Attached Pop. File Name: POPLIB(IL004)

Latitude: 41 ° 23 ' 50 " Longitude: 88 ° 18 ' 45 "

Distances:	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(PEORIA)

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.8E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.5E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: OLIN CORP. #1 Location: JOILET, IL

X Population Run JCL File Name: PHOSGYP2(IL005P)
Array Attached Pop. File Name: POPLIB(IL005)
Latitude: 41 ° 28 ' 20 " Longitude: 88 ° 8 ' 10 "

Distances: (meters)	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PEORIA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	8.5E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.9E+2					

Additional Source Term Attached
Comments: Change in stack status and base area (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: OLIN CORP. #2 Location: JOILET, IL

X Population Run JCL File Name: PHOSGYP2(IL006P)
Array Attached Pop. File Name: POPLIB(IL006)
Latitude: 41 ° 28 ' 50 " Longitude: 88 ° 7 ' 50 "

Distances: 800 1,000 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PEORIA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	8.0E+4					

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):
Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.6E+1					

Additional Source Term Attached
Comments: Change in base area.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: SECO, INC. Location: STREATOR, IL

X Population Run JCL File Name: PHOSGYP2(IL007P)
Array Attached Pop. File Name: POPLIB(IL007)
Latitude: 41 ° 5 ' 30 " Longitude: 88 ° 48 ' 40 "

Distances:	600	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(PEORIA)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.0E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.5E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: U.S. INDUSTRIAL CHEMICAL CO. Location: TUSCOLA, IL

X Population Run JCL File Name: PHOSGYP2(IL008P)

____ Array Attached Pop. File Name: POPLIB(IL008)

Latitude: 39 ° 48 ' 30 " Longitude: 88 ° 20 ' 30 "

Distances: (meters) 600 800 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:

	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances: (meters)

Food Fractions:

	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(SPRINGIL)

Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 89 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.2E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	6.9E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. #1 Location: FT. MADISON, IA

X Population Run JCL File Name: PHOSGYP2(IA001P)

Array Attached Pop. File Name: POPLIB(IA001)

Latitude: 40 ° 39 ' 10 " Longitude: 91 ° 12 ' 08 "

Distances:	500	1,000	2,000	2,200	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BURLINGT)

Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 88 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source: Circular Area (m^2):	2.0E+5					
Plume Rise:						
Buoyant (cal/s):						
Momentum (m/s):						
Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.7E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. #2 Location: FT. MADISON, IA

X Population Run JCL File Name: PHOSGYP2(IA002P)
Array Attached Pop. File Name: POPLIB(IA002)
Latitude: 40 ° 39 ' 05 " Longitude: 91 ° 12 ' 43 "

Distances:	500	1,000	2,000	2,200	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BURLINGT)
Location: WBAN: HDR: CODE: SET#:

Temperature: 10 °C Lid Height: 600m Rainfall: 88 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.0E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.3E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: AGRICO CHEMICAL CO. #3   Location: FT. MADISON, IA

X Population Run JCL File Name: PHOSGYP2(IA003P)
____ Array Attached Pop. File Name: POPLIB(IA003)
Latitude: 40 ° 39 ' 03 " Longitude: 91 ° 13 ' 00 "

Distances: 500 1,000 2,000 2,200 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(BURLINGT)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 10 °C Lid Height: 600m Rainfall: 88 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.4E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.2E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ARCADIAN CORP. #1 Location: GEISMAR, LA

X Population Run JCL File Name: PHOSGYP2(LA008P)

____ Array Attached Pop. File Name: POPLIB(LA008)

Latitude: 30 ° 14 ' 31 " Longitude: 91 ° 02 ' 38 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(BATONROU)

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.8E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	5.7E+1					

____ Additional Source Term Attached

Comments: Max. individual at 1800 m N (Jo88c); change in flux values per St88b.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ARCADIAN CORP. #2 Location: GEISMAR, LA

X Population Run JCL File Name: PHOSGYP2(LA009P)

___ Array Attached Pop. File Name: POPLIB(LA009)

Latitude: 30 ° 14 ' 24 " Longitude: 91 ° 02 ' 14 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(BATONROU)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.6E+1					

___ Additional Source Term Attached

Comments: Max. individual at 1200 m NW (Jo88c); change in flux values per St88b.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ARCADIAN CORP. #3 Location: GEISMAR, LA

X Population Run JCL File Name: PHOSGYP2(LA010P)

Array Attached Pop. File Name: POPLIB(LA010)

Latitude: 30 ° 14 ' 38 " Longitude: 91 ° 02 ' 11 "

Distances:	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BATONROU)

Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.1E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.1E+1					

Additional Source Term Attached

Comments: Max. individual at 1200 m NW (Jo88c); Change in flux values (St88b).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: ARCADIAN CORP. #4 Location: GEISMAR, LA

X Population Run JCL File Name: PHOSGYP2(LA011P)

____ Array Attached Pop. File Name: POPLIB(LA011)

Latitude: 30 ° 14 ' 47 " Longitude: 91 ° 02 ' 04 "

Distances: (meters)	800	1,000	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(BATONROU)

Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.0E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Nuclide	Class	AMAD						
Rn-222	*	*	1.2E+1					

____ Additional Source Term Attached

Comments: Max. individual at 1200 m NW (Jo88c); Change in flux values (St88b).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. Location: HAHNVILLE, LA

X Population Run JCL File Name: PHOSGYP2(LA012P)
___ Array Attached Pop. File Name: POPLIB(LA012)
Latitude: 29 ° 59 ' 10 " Longitude: 90 ° 27 ' 40 "

Distances:	700	900	2,000	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(BATONROU)
Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9.0E+4					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.1E+1					

___ Additional Source Term Attached
Comments: Max. individual at 1800 m N (Jo88c); Change in flux values (St88b).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. Location: UNCLE SAM, LA

X Population Run JCL File Name: PHOSGYP2(LA013P)

Array Attached Pop. File Name: POPLIB(LA013)

Latitude: 30 ° 02 ' 20 " Longitude: 90 ° 48 ' 40 "

Distances:	500	1,000	2,000	2,200	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:

(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BATONROU)

Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.84E+6					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.8E+2					

Additional Source Term Attached

Comments: Change in flux values (St88b).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AGRICO CHEMICAL CO. Location: DONALDSONVILLE, LA

X Population Run JCL File Name: PHOSGYP2(LA015P)
___ Array Attached Pop. File Name: POPLIB(LA015)
Latitude: 30 ° 04 ' 42 " Longitude: 90 ° 56 ' 14 "

Distances (meters): 500 1,800 2,000 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(BATONROU)
Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 700m Rainfall: 137 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source: Circular Area (m^2):	2.0E+6					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.3E+2					

___ Additional Source Term Attached
Comments: Max. individual at 1500 m NNE (Jo88c); Change in flux values (St88b).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: NU-SOUTH INDUSTRIES, INC. Location: PASCAGOULA, MS

X Population Run JCL File Name: PHOSGYP2(MS001P)
Array Attached Pop. File Name: POPLIB(MS001)
Latitude: 30 ° 21 ' 33 " Longitude: 88 ° 30 ' 00 "

Distances: (meters)	500	1,000	2,000	3,000	4,000	7,400	7,600	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(BILOXI)
Location: WBAN: HDR: CODE: SET#:

Temperature: 20 °C Lid Height: 900m Rainfall: 170 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.01E+6					

Plume Rise:

Buoyant (cal/s):						
Momentum (m/s):						

Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.5E+2					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: FARMERS CHEMICAL CO. Location: JOPLIN, MO

X Population Run JCL File Name: PHOSGYP2(M0001P)
___ Array Attached Pop. File Name: POPLIB(M0001)
Latitude: 37 ° 05 ' 30 " Longitude: 94 ° 36 ' 40 "

Distances:	500	1,100	1,300	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name: ___

Distances: ___
(meters) ___

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(SPRINGMO)
Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 13 °C Lid Height: 700m Rainfall: 101 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.8E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.0E+1					

___ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 **Source Category:** PHOSPHOGYPSUM **Page** 1 **of** 1

Facility: W.R. GRACE & CO. #1 **Location:** JOPLIN, MO

X **Population Run** **JCL File Name:** PHOSGYP2(MO002P)

Array Attached **Pop. File Name:** POPLIB(MO002)

Latitude: 37 ° 05 ' 36 " **Longitude:** 94 ° 23 ' 55 "

Distances (meters): 500 1,400 1,600 3,000 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run **JCL File Name:**

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached **STAR File Name:** STARLIB(SPRINGMO)

Location: **WBAN:** **HDR:** **CODE:** **SET#:**

Temperature: 13 °C **Lid Height:** 700m **Rainfall:** 101 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X **Area Source:**

Circular Area (m^2):	1.0E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.6E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: W.R. GRACE & CO. #2   Location: JOPLIN, MO

X Population Run JCL File Name: PHOSGYP2(MO003P)

Array Attached Pop. File Name: POPLIB(MO003)

Latitude: 37 ° 05 ' 31 " Longitude: 94 ° 23 ' 45 "

Distances:	500	1,400	1,600	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(SPRINGMO)

Location: WBAN: HDR: CODE: SET#:

Temperature: 13 °C Lid Height: 700m Rainfall: 101 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.0E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.6E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: TEXASGULF CHEMICAL CO. #1 Location: AURORA, NC

X Population Run JCL File Name: PHOSGYP2(NC001P)
______ Array Attached Pop. File Name: POPLIB(NC001)
Latitude: 35 ° 22 ' 10 " Longitude: 76 ° 47 ' 10 "

Distances:	500	1,000	2,200	2,400	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances: ______
(meters) ______

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(CHERRYPT)
Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 17 °C Lid Height: 900m Rainfall: 141 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	1.6E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	8.0E+0					

______ Additional Source Term Attached
Comments: Max. individual at 3500 m ENE (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: TEXASGULF CHEMICAL CO. #2 Location: AURORA, NC

X Population Run JCL File Name: PHOSGYP2(NC002P)
___ Array Attached Pop. File Name: POPLIB(NC002)
Latitude: 35 ° 22 ' 10 " Longitude: 76 ° 46 ' 40 "

Distances:	500	1,000	2,200	2,400	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(CHERRYPT)
Location: WBAN: HDR: CODE: SET#:

Temperature: 17 °C Lid Height: 900m Rainfall: 141 cm/yr

	1	2	3	4	5	6
___ Stack Source:						
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	3.0E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

	A	B	C	D	E	F	G
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.3E+1					

___ Additional Source Term Attached
Comments: Location of max individual 4000 m ENE (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: TEXASGULF CHEMICAL CO. #3 Location: AURORA, NC

X Population Run JCL File Name: PHOSGYP2(NC003P)
___ Array Attached Pop. File Name: POPLIB(NC003)
Latitude: 35 ° 22 ' 40 " Longitude: 76 ° 47 ' 20 "

Distances: 500 1,000 1,900 2,100 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(CHERRYPT)
Location: WBAN: HDR: CODE: SET#:

Temperature: 17 °C Lid Height: 900m Rainfall: 141 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	5.1E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.4E+1					

___ Additional Source Term Attached
Comments: Location of max individual 3700 m WSW (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: TEXASGULF CHEMICAL CO. #4 Location: AURORA, NC

X Population Run JCL File Name: PHOSGYP2(NC004P)

Array Attached Pop. File Name: POPLIB(NC004)

Latitude: 35 ° 22 ' 50 " Longitude: 76 ° 47 ' 40 "

Distances:	500	1,600	1,800	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(CHERRYPT)

Location: WBAN: HDR: CODE: SET#:

Temperature: 17 °C Lid Height: 900m Rainfall: 141 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	5.1E+5					

Plume Rise:							
Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.1E+1					

Additional Source Term Attached

Comments: Location of max individual 3200 m WSW (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: TEXASGULF CHEMICAL CO. #5 Location: AURORA, NC

X Population Run JCL File Name: PHOSGYP2(NC005P)

____ Array Attached Pop. File Name: POPLIB(NC005)

Latitude: 35 ° 22 ' 20 " Longitude: 76 ° 47 ' 40 "

Distances:	500	1,200	1,400	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(CHERRYPT)

Location: WBAN: HDR: CODE: SET#:

Temperature: 17 °C Lid Height: 900m Rainfall: 141 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	5.1E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						
___ Entered (m):						

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	2.0E+1					

____ Additional Source Term Attached

Comments: Location of max individual 2900 m WSW (Jo88c): flux values changed.

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AMOCO OIL CO. #1 Location: TEXAS CITY, TX

X Population Run JCL File Name: PHOSGYP2(TX001P)
____ Array Attached Pop. File Name: POPLIB(TX001)
Latitude: 29 ° 21 ' 40 " Longitude: 94 ° 56 ' 10 "

Distances: 500 1,700 1,900 3,000 4,000 5,000 10,000 20,000 30,000 40,000
(meters) 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(HOUSTON)
Location: WBAN: HDR: CODE: SET#:

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+5					

Plume Rise:

___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

Rn-222	*	*	3.1E+1					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: AMOCO OIL CO. #2 Location: TEXAS CITY, TX

X Population Run JCL File Name: PHOSGYP2(TX002P)
____ Array Attached Pop. File Name: POPLIB(TX002)
Latitude: 29 ° 21 ' 50 " Longitude: 94 ° 56 ' 00 "

Distances:	500	1,700	1,900	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(HOUSTON)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	2.0E+4					

Plume Rise:

____ Buoyant (cal/s):							
____ Momentum (m/s):							
____ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.0E+0					

____ Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: KERLEY AGRICULTURAL CHEMICALS Location: PASADENA, TX

X Population Run JCL File Name: PHOSGYP2(TX003P)
Array Attached Pop. File Name: POPLIB(TX003)
Latitude: 29 ° 44 ' 30 " Longitude: 95 ° 11 ' 00 "

Distances: (meters)	500	1,200	1,400	3,000	4,000	5,000	10,000	20,000	30,000	40,000
	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances: (meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(HOUSTON)
Location: WBAN: HDR: CODE: SET#:

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.1E+5					

Plume Rise:

Buoyant (cal/s):
Momentum (m/s):
Entered (m):

Pasquill Stability A B C D E F G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	3.0E+1					

Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: MOBIL MINING & MINERALS DIV. #1 Location: PASADENA, TX

X Population Run JCL File Name: PHOSGYP2(TX004P)
______ Array Attached Pop. File Name: POPLIB(TX004)
Latitude: 29 ° 44 ' 15 " Longitude: 95 ° 11 ' 35 "

Distances:	500	1,000	2,100	2,300	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

______ Individual Run JCL File Name: ______

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ______ Array Attached STAR File Name: STARLIB(HOUSTON)
Location: ______ WBAN: ______ HDR: ______ CODE: ______ SET#: ______

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

______ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	2.4E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	8.3E+1					

______ Additional Source Term Attached
Comments: Location of max individual 2300 m N (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: MOBIL MINING & MINERALS DIV. #2 Location: PASADENA, TX

X Population Run JCL File Name: PHOSGYP2(TX005P)
Array Attached Pop. File Name: POPLIB(TX005)
Latitude: 29 ° 43 ' 25 " Longitude: 95 ° 11 ' 10 "

Distances (meters): 500 1,000 2,100 2,300 4,000 5,000 10,000 20,000 30,000 40,000 50,000 60,000 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(HOUSTON)
Location: WBAN: HDR: CODE: SET#:

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:
Circular Area (m^2): 3.6E+5

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):
Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)
Rn-222	*	*	1.1E+2

Additional Source Term Attached
Comments: Location of max individual 1300 m S (Jo88c); change in stack status (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: MOBIL MINING & MINERALS DIV. #3   Location: PASADENA, TX

X Population Run   JCL File Name: PHOSGYP2(TX006P)

____ Array Attached   Pop. File Name: POPLIB(TX006)

Latitude: 29 ° 43 ' 25 "   Longitude: 95 ° 11 ' 35 "

Distances:	500	1,000	2,800	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run   JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached   STAR File Name: STARLIB(HOUSTON)

Location: ____   WBAN: ____   HDR: ____   CODE: ____   SET#: ____

Temperature: 21 °C   Lid Height: 700m   Rainfall: 117 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	6.1E+5					
Plume Rise:						
___ Buoyant (cal/s):						
___ Momentum (m/s):						

___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	1.3E+2					

____ Additional Source Term Attached

Comments: Location of max individual 1000 m SW (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: PHILLIPS CHEMICAL CO. Location: PASADENA, TX

X Population Run JCL File Name: PHOSGYP2(TX007P)
Array Attached Pop. File Name: POPLIB(TX007)
Latitude: 29 ° 44 ' 30 " Longitude: 95 ° 10 ' 52 "

Distances:	500	1,200	1,400	3,000	4,000	5,000	10,000	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(HOUSTON)
Location: WBAN: HDR: CODE: SET#:

Temperature: 21 °C Lid Height: 700m Rainfall: 117 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	1.4E+5					

Plume Rise:

Buoyant (cal/s):							
Momentum (m/s):							
Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	4.6E+1					

Additional Source Term Attached
Comments: Location of max individual 2400 m N (Jo88c).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: PHOSPHOGYPSUM Page 1 of 1

Facility: CHEVRON CHEMICAL CO. Location: MAGNA, UT

X Population Run JCL File Name: PHOSGYP2(UT001P)
____ Array Attached Pop. File Name: POPLIB(UT001)
Latitude: 40 ° 44 ' 45 " Longitude: 112 ° 09 ' 45 "

Distances:	500	1,000	2,000	3,000	4,000	5,700	5,900	20,000	30,000	40,000
(meters)	50,000	60,000	80,000							

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

____ Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(SALTLAKE)
Location: WBAN: HDR: CODE: SET#:

Temperature: 11 °C Lid Height: 500m Rainfall: 39 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m²):	1.21E+6					

Plume Rise:
____ Buoyant (cal/s):
____ Momentum (m/s):
____ Entered (m):

Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.8E+1					

____ Additional Source Term Attached
Comments: Change in flux values (Co88).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989   Source Category: PHOSPHOGYPSUM   Page 1 of 1

Facility: CHEVRON CHEMICAL CO.   Location: ROCK SPRINGS, WY

X Population Run   JCL File Name: PHOSGYP2(WY001P)

___ Array Attached   Pop. File Name: POPLIB(WY001)

Latitude: 41 ° 32 ' 30 "   Longitude: 109 ° 09 ' 10 "

Distances (meters): 500, 1,000, 2,000, 3,000, 4,100, 4,300, 10,000, 20,000, 30,000, 40,000, 50,000, 60,000, 80,000

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

___ Individual Run   JCL File Name:

Distances (meters):

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached   STAR File Name: STARLIB(ROCKSPGS)

Location: WBAN: HDR: CODE: SET#:

Temperature: 7 °C   Lid Height: 500m   Rainfall: 35 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	1.82E+6					

Plume Rise:							
___ Buoyant (cal/s):							
___ Momentum (m/s):							
___ Entered (m):							
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					
Rn-222	*	*	7.1E+1					

___ Additional Source Term Attached

Comments: Change in flux values (Co88).

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Phosphogypsum Part. Page 1 of 2

Facility: Model Phosphogypsum Stack/minimum Location: Generic Site in Central Florida

X Population Run JCL File Name: PHSGYPPT(GYPAMINP)

___ Array Attached Pop. File Name: POPLIB(POPC)

Latitude: ___ ° ___ ' ___ " Longitude: ___ ° ___ ' ___ "

Distances:	500	800	1,000	1,500	2,000	3,000	4,000	5,000	8,000	10,000
(meters)	15,000	20,000	30,000	40,000	50,000	80,000				

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

___ Individual Run JCL File Name: ___

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ___ Array Attached STAR File Name: STARLIB(STARC)

Location: ___ WBAN: ___ HDR: ___ CODE: ___ SET#: ___

Temperature: 22 °C Lid Height: 1000 m Rainfall: 142 cm/yr

___ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						
X Area Source:						
Circular Area (m^2):	9E4					

Plume Rise:

___ Buoyant (cal/s): ___

___ Momentum (m/s): ___

X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Phosphogypsum Part. Page 2 of 2

Facility: Model Phosphogypsum Stack/minimum Location: Generic Site in Central Florida

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	1.8E-5					
Th-234	Y	1.0	0					
Pa-234	Y	1.0	0					
U-234	Y	1.0	1.9E-5					
Th-230	Y	1.0	2.9E-5					
Ra-226	W	1.0	1.8E-4					
Rn-222	*	*	1.8E-4					
Po-218	W	1.0	0					
Pb-214	D	1.0	1.8E-4					
Bi-214	W	1.0	1.8E-4					
Po-214	W	1.0	0					
Pb-210	W	1.0	2.1E-4					
Bi-210	W	1.0	0					
Po-210	W	1.0	1.5E-4					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989
Source Category: Phosphogypsum Part. Page 1 of 2

Facility: Model Phosphogypsum Stack/average
Location: Generic Site in Central Florida

X Population Run JCL File Name: PHSGYPPT(GYPAAVGP)
Array Attached Pop. File Name: POPLIB(POPC)
Latitude: ° ' " Longitude: ° ' "

Distances:	500	800	1,000	1,500	2,000	3,000	4,000	5,000	8,000	10,000
(meters)	15,000	20,000	30,000	40,000	50,000	80,000				

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

Individual Run JCL File Name:

Distances:
(meters)

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: Array Attached STAR File Name: STARLIB(STARC)
Location: WBAN: HDR: CODE: SET#:

Temperature: 22 °C Lid Height: 1000 m Rainfall: 142 cm/yr

Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:

Circular Area (m^2):	90E4					

Plume Rise:
Buoyant (cal/s):
Momentum (m/s):

X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide Class AMAD Release Rates (Ci/yr)

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Phosphogypsum Part. Page 2 of 2

Facility: Model Phosphogypsum Stack/average Location: Generic Site in Central Florida

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	1.8E-4					
Th-234	Y	1.0	0					
Pa-234	Y	1.0	0					
U-234	Y	1.0	1.9E-4					
Th-230	Y	1.0	2.9E-4					
Ra-226	W	1.0	1.8E-3					
Rn-222	*	*	1.8E-3					
Po-218	W	1.0	0					
Pb-214	D	1.0	1.8E-3					
Bi-214	W	1.0	1.8E-3					
Po-214	W	1.0	0					
Pb-210	W	1.0	2.1E-3					
Bi-210	W	1.0	0					
Po-210	W	1.0	1.5E-3					

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Phosphogypsum Part. Page 1 of 2

Facility: Model Phosphogypsum Stack/maximum Location: Generic Site in Central Florida

X Population Run JCL File Name: PHSGYPPT(GYPAMAXP)
____ Array Attached Pop. File Name: POPLIB(POPC)
Latitude: ____° ____' ____" Longitude: ____° ____' ____"

Distances:	500	800	1,000	1,500	2,000	3,000	4,000	5,000	8,000	10,000
(meters)	15,000	20,000	30,000	40,000	50,000	80,000				

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					X
Vegetables:					

____ Individual Run JCL File Name: ____

Distances:										
(meters)										

Food Fractions:	F1-Grown at Home	F2-Grown Regionally	F3-Imported	Urban/Low Productivity	Rural
Meat:					
Milk:					
Vegetables:					

Meteorological (STAR) Data: ____ Array Attached STAR File Name: STARLIB(STARC)
Location: ____ WBAN: ____ HDR: ____ CODE: ____ SET#: ____

Temperature: 22 °C Lid Height: 1000 m Rainfall: 142 cm/yr

____ Stack Source:	1	2	3	4	5	6
Height (m):	1.0					
Diameter (m):						

X Area Source:						
Circular Area (m^2):	284E4					

Plume Rise:							
__ Buoyant (cal/s):							
__ Momentum (m/s):							
X Entered (m):	0	0	0	0	0	0	0
Pasquill Stability	A	B	C	D	E	F	G

Nuclide	Class	AMAD	Release Rates (Ci/yr)					

X Additional Source Term Attached

AIRDOS-EPA/DARTAB/RADRISK INFORMATION SHEET

Date: May 1989 Source Category: Phosphogypsum Part. Page 2 of 2

Facility: Model Phosphogypsum Stack/maximum Location: Generic Site in Central Florida

Additional Source Term

		Source:	1	2	3	4	5	6
Nuclide	Class	AMAD	Release Rates (Ci/yr)					
U-238	Y	1.0	5.8E-4					
Th-234	Y	1.0	0					
Pa-234	Y	1.0	0					
U-234	Y	1.0	6.0E-4					
Th-230	Y	1.0	9.2E-4					
Ra-226	W	1.0	5.6E-3					
Rn-222	*	*	5.6E-3					
Po-218	W	1.0	0					
Pb-214	D	1.0	5.6E-3					
Bi-214	W	1.0	5.6E-3					
Po-214	W	1.0	0					
Pb-210	W	1.0	6.5E-3					
Bi-210	W	1.0	0					
Po-210	W	1.0	4.9E-3					

APPENDIX B:

GENERIC UNIT COSTS FOR EARTH COVER BASED RADON-222 CONTROL TECHNIQUES

An impenetrable cover on radium-bearing materials can be used to control the release of radon-222 into the biosphere. Cover materials control emissions by retarding the movement of radon-222 long enough for it to decay in the cover material. The types of impervious covers that have been suggested include earthen (dirt) covers, water covers, synthetic covers, asphalt covers, and soil cement covers (NRC 80). Earth and water cover materials have been shown to be most cost effective in reducing radon-222 emissions (NRC 80). However, as water cover is inappropriate for situations requiring long-term stabilization, earthen cover is the most widely accepted option for the control of radon-222 emissions. The use and costs of employing earthen cover as a radon-222 control technique have been discussed in prior reports (NRC80, EPA82, EPA86, SCA88).

The purpose of this appendix is to provide generic unit costs for earth covers used to control radon-222 emissions in situations where this type of control is evaluated to assess costs and effectiveness for the Clean Air Act. The situations or activities where this type of control technique may be applicable include, but are not limited to: inactive uranium mill tailings, licenced uranium mill tailings, phosphogypsum piles, Department of Energy radon sites, and conventional open pit uranium mines.

In each situation, where earthen covers are evaluated, the unit cost of control will vary depending on local conditions and the particular characteristics of the radium-bearing materials. Proximity, availability, characteristics of earthen materials, the necessity for drainage systems, and the techniques required to prevent erosion are determined by geographic location. The characteristics of the radium-bearing materials and the pile in which they are contained determine release rates, the depth of cover required, and the necessity of regrading the materials so that dirt cover can be effectively used for long term stabilization.

This appendix provides a set of generic unit costs for the operations that are required for earthen cover control, within the range of characteristics of the radium-bearing material for all sites of interest. This information can be used to develop the cost estimate for the dirt cover control option, for each source category, and will ensure that estimated control costs for each option are comparable across source categories.

This appendix begins with a general description given in Section B.1, of the methodology used to estimate costs for earthen cover. The formulas used to calculate the depth of cover required to meet specified emission rates are presented in Section B.2. A summary of the geometry required to estimate the pile volumes and surface areas is given in Section B.3, and the development and documentation of the generic units costs are presented in Section B.4.

B.1 ESTIMATING COSTS FOR EARTHEN COVERS

A variety of information is needed to develop cost estimates for earth cover control. Such information can be separated into three basic classifications: (1) data required to calculate the depth of cover required to reduce emissions to the desired level; (2) data required to calculate the relevant volumes and surface areas; and (3) data on the unit costs of the various activities required to procure, place and protect the cover.

The rate of radon emanation is inversely related to the depth of earthen cover used. The thickness of cover required to reduce radon-222 emissions from uranium-bearing piles to a desired level depends on several variables to include the initial radon flux, the moisture content of the soil, the density of the soil, and the depth of the pile. The necessary variables and equations required to calculate cover depths are provided in Section B.2.

To calculate the required volume of cover materials, it is necessary to establish the surface area of the pile in addition to the required depth of cover. However, the surface area covered is only one of many volume or area estimates that is required. For example, if the slopes of the waste pile change, when applying dirt cover, it becomes necessary to calculate the volume of earth moved. In addition, since some erosion prevention methods are only applied to the top or the sides of the waste piles, may be necessary to calculate the two surface areas separately.

The absence of data on the various parameters of the waste piles will complicate the calculation of the required volumes or surface areas. In some cases, only the total volume of waste products are known, while in others only the total area of the base of the pile are known. In many cases, therefore, surface and volume calculations are based wholly, or in part, on a model pile. A model pile has been developed for the purposes of calculating volumes and surface areas. This pile is assumed to have a square or rectangular base and a flat top such that its shape is similar to a truncated pyramid. The geometric model and equations necessary for the calculations of volumes and surface areas are presented in Section B.3.

Unit costs for the necessary site work construction activities may be applied to develop cost estimates, once the relevant depths volumes, and surface areas are calculated. The unit costs are based, for the most part, on engineering cost manuals used by the construction industry to prepare bids.

The first step in covering a pile is to excavate and place on that pile any radioactive materials not already on it. The most significant portion of these wastes are evaporation ponds, which are used to regulate or control the water level in the waste impoundment. The total cost of excavating evaporative ponds can be calculated by multiplying the volume of waste material by unit costs for excavation (on trucks), hauling, spreading, and compacting.

Once all the contaminated materials has been placed on the pile, the pile is regraded, in preparation for the placement of dirt cover. The total cost, for this operation, is the product of the volume to be regraded and the unit cost of grading.

The total cost of the dirt cover is the product of the volume required and unit costs for excavating, hauling, spreading, and compacting. The hauling distances will depend on the proximity to the site of appropriate cover materials. In most cases, the requisite dirt will be available on-site. Cover material is purchased when not available on-site.

When the final earth cover has been put in place, some form of erosion control is required to provide long-term stabilization. Two erosion control systems are considered in this appendix. The first is an essentially maintenance-free gravel and rock system designed for arid conditions. In this system gravel is placed on top of the pile, and rock (rip-rap) is placed on the sides of the pile. A second system, designed for wet climates, consists of a grass or vegetation cover, and is not considered maintenance free. A drainage system is required for the wet climate system.

Synthetic covers or liners, are considered the final component of dirt cover systems. Synthetic covers are placed over piles but under the cover in wet climates to reduce water infiltration into the stack. Synthetic liners are placed under new piles to prevent groundwater contamination.

The calculations for unit costs, for the site work construction activities, are discussed in Section B.4.

B.2 DEPTH OF COVER

The thickness of earth cover required for a certain degree of remedial control depends upon the type of earth, and the rate at which radon-222 emanates from the bare tailings. The purpose of this section is to estimate, using a mathematical model, the thickness of the cover required to retard the movement of Radon-222.

The diffusion of Radon-222 through earth is a complex phenomenon affected by processes such as molecular diffusion, described mathematically by Fick's law (EPA86). Diffusion strongly depends on the porosity and moisture content of the medium through which it occurs (EPA86). Ideally, the diffusion coefficient should be measured experimentally for a given earth cover at its ambient moisture and expected compaction level. In this section, a constant level of compaction is assumed.

The relationship between the final flux from earthen covered surface and the flux from bare tailings surface is described by equation (1):

$$FC = FT(\exp(-bx)) \qquad (1)$$

where: FC is the flux through soil cover pCi/m^2s;
FT is the flux through tailings pCi/m^2s;
b is a coefficient dependent upon the moisture content, bulk density, specific gravity and porosity of the soil used; and
x is the cover thickness in cm.
x is the cover thickness in cm;

Values for b, for selected regions are presented in Table B-1. These values are computed as:

$$b = (\quad /D) \qquad (2)$$

where: is the Radon-222 decay, fixed at 2.1 x 10 /s; and D is the diffusion coefficient of cover, cm^2/sec.

The diffusion coefficient of cover (D) is related to the fraction of saturation m, and is empirically estimated as (NRC84):

$$D = .07 \exp [-4(m-mp^2 \quad +m^5) \ (cm^3/sec) \qquad (3)$$

where: p is the porosity of the cover, given by [1-(bulk density/specific gravity)]. To estimate D we need to calculate values for m. We begin to estimate values for m by calculating the average moisture content. The average moisture content M is estimated as (NRC84):

$$M = 3.p1/2 \quad - .03\ E + 3.9\ fcm - 1.0 \qquad (4)$$

where: M is the percentage of dry weight moisture content;
P is the precipitation rate (in/yr);
E the lake evaporation rate (in/yr); and
fcm the soil fraction rate passing a 200-mesh screen;

Using values for rainfall, evaporation rates, (NOAA87) and soil fraction rates, each averaged across cities by state (see Table B-1), were used in equation (4) to estimate M. Given these values, estimates for m (the saturation rate) are derived:

$$m = .01\ M /(1/ \quad -1/ \quad) \qquad (5)$$

where: is bulk density, assumed fixed at $1.6 g/cm^3$; and
is specific gravity, assumed fixed at $2.6 g/cm$;

Substituting values for m and values for the porosity of cover into equation (3) yields estimates for the diffusion coefficient, D. These values are substituted into equation (2) to estimate b.

Table B-1 provides example calculations of b for selected states, based on statewide averages of rainfall rates, evaporation rates, and soil fractions.[1]

For comparison, mean moisture contents and coefficients for b, by specific earth type and moisture content are presented in Table B-2. These estimates, taken from EPA86, are mean values by soil type and not state averages as shown in Table B-1. If specific cover material characteristics are available, b may be estimated directly as in Table B-2. If, however, specific soil availability is not known, average values for b at the state site can be developed, as in Table B-1.

Given a value of b, the cover thickness (x) required to reduce radon-222 emissions effectively, from an initial rate to a desired rate, can be calculated by equation (6), simplified:

$$x = \text{Ln}\ (r)/b \qquad (6)$$

where: R (the effectiveness of cover) = FC/FT and

The necessary depth of cover can be determined by substituting different valued for R and b. A sample calculation of the effectiveness of cover for various thicknesses assuming an initial radon-222 rate of 280 pCi/m^2s, is presented in Table B-3. Also given is the calculation of depth of cover to reduce the initial flux to levels of 20, 6 and 2 pCi/m^2s, respectively. A graph showing changes in radon penetration with respect to earth cover thickness, for the soil used in Table B-3, is provided in Figure B-1.

B.3 VOLUMES AND SURFACE AREAS

The unit costs used to estimate the cost of establishing an earthen cover control strategy are provided in Section B.4. These costs are applied to volumes and surface areas of actual and model waste disposal piles. While some of these volumes and surface areas are often available from direct observation, in many cases, it is necessary to infer them through the use of a model pile. The purpose of this section is to provide a set of

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[1] A soil fraction value of .1 was used for Florida (see Table B-1) to reflect the largely sandy composition of its soil.

Table B-1. Moisture Content and Coefficient b for Selected States

State	Average Rainfall Rate	Average Evap. Rate	Soil Fraction	Average Moisture Content	Coefficie b
Arkansas	52	42	0.2	20.8	0.018
Florida	52	48	0.1	20.3	0.017
Idaho	21	34	0.2	13.0	0.010
Illinois	36	37	0.2	17.3	0.014
Iowa	3	39	0.2	17.2	0.013
Louisiana	62	43	0.2	22.9	0.023
Mississippi	64	42	0.2	23.3	0.024
Missouri	40	44	0.2	18.1	0.014
North Carolina	52	43	0.2	20.8	0.018
Texas	47	47	0.2	19.6	0.016
Utah	16	55	0.2	10.5	0.0091
Wyoming	8	45	0.2	7.2	0.0077

Table B-2. Moisture Content and Coefficient b for Selected Soil Types

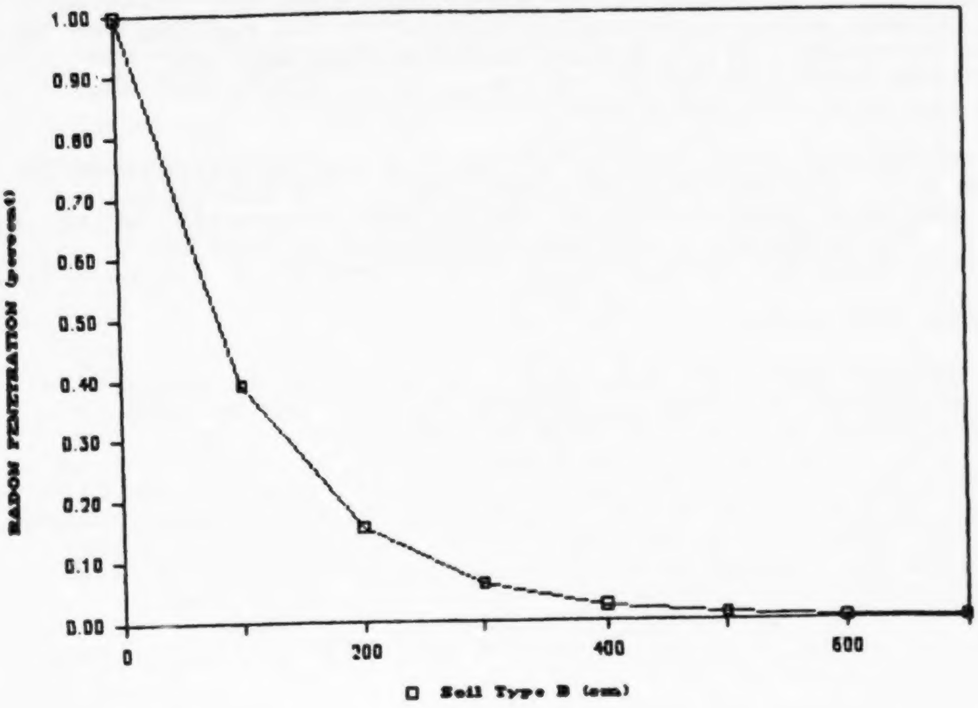
Earth Type	% Moisture	Coefficient b
A Sandy Soil	3.4	0.00699
B Soil	7.5	0.00937
C Soil	12.6	0.01350
D Compacted Moist Soil	17.0	0.01850
E Clay	21.5	0.02553

Table B-3. Variable Values, Calculations and Results for Soil Type B, Initial Flux of 280 pCi/m2/s and Final Flux of 20, 6 and 2 pCi/m2/s

Cover Thickness (cm)	Variable b	Tailings Flux FT	Final Cover Flux	Effectiveness FC/FT
0	0.00938	280	280.0000	1.000
100	0.00938	280	109.6334	0.392
200	0.00938	280	42.9267	0.153
300	0.00938	280	16.8079	0.060
400	0.00938	280	6.5811	0.024
500	0.00938	280	2.5768	0.009
600	0.00938	280	1.0089	0.004
700	0.00938	280	0.3951	0.001

Final Flux	Initial Flux	Ratio R	Ln(R)	Coefficient b	-Ln(R)/b	Depth (m) x
20	280	0.071	-2.63	0.00937	281.65	2.82
6	280	0.021	-3.84	0.00937	410.14	4.1
2	280	0.007	-4.94	0.00937	527.39	5.27

Figure B-1. Radon-222 Penetration
with Respect to Cover Thickness



equations that are used to estimate the required parameters and to describe the basic geometry and the geometric model involved.

The geometric model developed for the estimation of volumes and surface areas is based on the assumption that the piles or stacks involved occupy a pyramidal shape with the top removed (a truncated pyramid). it is further assumed that data for the length of the base, the height of the pile or stack, and the slope of the sides are available.

The volume and surface area of the pile can be calculated by using the model and the required input data. In addition, formulas are developed to provide the volume of material which is regarded. The geometric model and the equations used to calculate volumes and surface areas are presented in Figure B-2.

B.4 GENERIC UNIT COSTS

This section provides unit costs for a number of activities involved when earthen cover is used to control the release of ponds; purchasing and hauling dirt to the site when necessary; excavating dirt; grading the pile when slopes are too steep to hold dirt cover; placing the dirt on the pile; grading the dirt once it is in place; compacting the dirt once it has been graded; covering the dirt with gravel on top and using rip-rap on the sides to prevent erosion in arid climates or seeding, and also constructing drainage systems to prevent erosion in damp climates. A list of the various unit costs and their applicability to various situations is provided in tabular form in Table B-4.

Where possible, unit costs are developed using one consistent set of engineering cost data. The data are taken from a set of engineering cost books published by the R.S. Means Company (ME88a, ME88b, ME87a, ME87b, ME85). In all cases, cost data obtained from ME are used to represent the national average. Although ME provides a set of indexes that can be used to adjust the labor component of these costs for most large cities, these factors are not presented in this analysis because most of the piles or stacks are not located in large urban areas, and therefore are not related to the indices presented in ME. Further, the variation in these factors is small, and the bulk of the tasks to be performed are not labor-intensive enough for them to be considered. The assumptions and the cost factors for each item are discussed below.

B.4.1 Earthen Cover Costs

In some cases, the earth required for cover material is available onsite. This is common for source categories such as

Table B-4. Types of Unit Costs and their Applicability

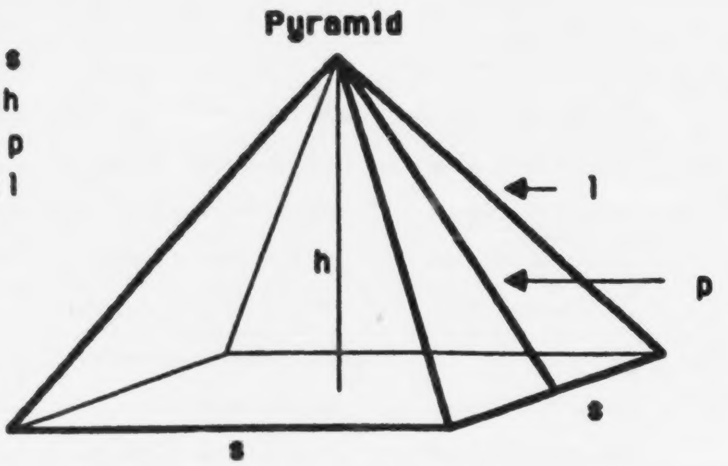
Unit Cost	Activity	Application	Volume or Surface Area
Purchase Earth	Procure Earth For Cover	Where On-site Earth Not Available	Volume (Surface x Cover Depth)
Hauling	Haul Excavated Earth to Pile	All Final Covers	Volume (Surface x Cover Depth)
	Haul Excavated Evap. Ponds	Where Ponds Combined with Piles	Volume (Pond Surface Area x 1m)*
Excavation to Trucks	Excavate Earth For Cover	Where On-site Earth Available	Volume (Surface x Cover Depth)
	Excavate Evaporative Ponds	Where Ponds Combined With Piles	Volume (Pond Surface Area x 1m)*
Excavation	Excavate For Below Grade Pile	New Below Grade Impoundments	Volume of Tailings Below Grade
Placing	Place Earth on Pile	Where On-site Earth Not Available	Volume (Surface x Cover Depth)
Grading or Spreading	Regrading Slopes	Where Slopes Steeper Than 1:5	Volume (Grading Volume)
	Grading Final Covers	All Final Covers	Volume (Cover Depth x 1m)
	Grading Evap Pond Material	Where Ponds Combind with Piles	Volume (Pond Surface Area x 1m)*
Compacting	Compacting Earth Covers	All Final Covers	Area (Surface Area)
	Compacting Evap. Pond Material	Where Ponds Combined with Piles	Area (Pond Surface Area)
Gravel	Erosion Prevention	Arid Climates-Top Surfaces	Volume (Top Surface to .5m Depth)
Riprap	Erosion Prevention	Arid Climates-Sides	Volume (Sides to .5m Depth)
Seeding	Erosion Prevention	Lush Climates	Area (Surface Area)
Earth Cover Maintenance	Erosion Prevention	Lush Climates	Area (Surface Area)
Drain System	Erosion Prevention	Lush Climates-Leachate Will Harm Gr	Area (Surface Area)
Drain System Maintenance	Erosion Prevention	Lush Climates-Leachate Will Harm Gr	Area (Surface Area)
Synthetic Covers & Liners	Erosion Prevention	Lush Climates-Leachate Will Harm Gr	Area (Surface Area)
	Groundwater Protection	New Below or on Grade Impoundments	Area (Below Grade Surface)

* It is assumed that evaporation ponds are constructed to a depth of one meter.

Figure B-2

Based on the assumption that the radium bearing wastes are stacked in in pyramidal piles we begin with the basic geometry of a pyramid.

base side : s
perp. height : h
slant height : p
lateral edge : l

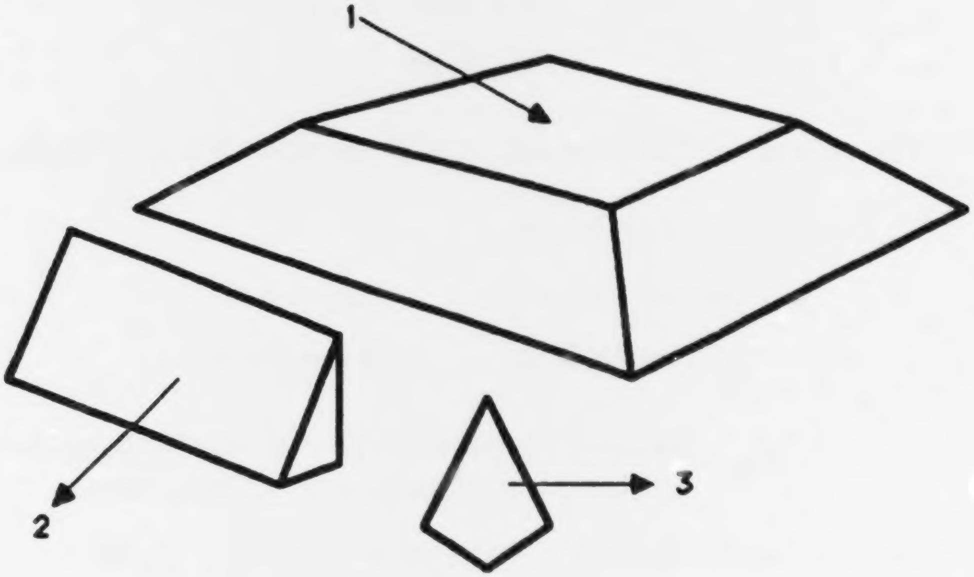

Pyramid

Volume = $1/3\ s^2h$
Surface Area = 2sl

However, the piles or stacks are assumed to be truncated pyramids with a square base and top and sloping sides as shown below :

Figure B-2 (cont.)

Volume and Area of a Truncated Pyramid



The truncated pyramid has been subdivided into three sections to simplify calculations. The dimensions of the truncated pyramid are given below :

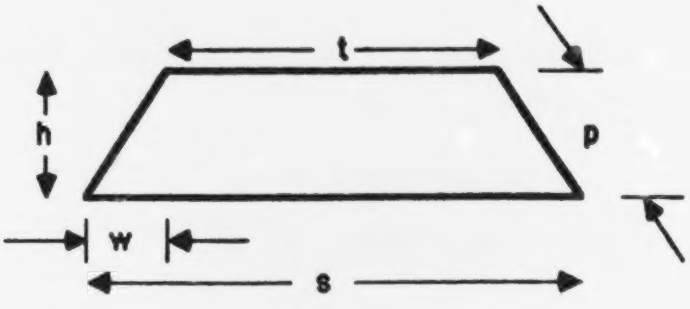


Figure B-2 (cont.)

VOLUME

If the slope of the sides of the stack (ratio of vertical rise over horizontal distance) is σ then the following condition holds:

$$w = h/\sigma$$

$$t = s-2w$$

The volumes of the three sections of the stack are as follows :

$V1 = 1/2[\, t+s\,]\, ht$

$V2 = 2[\, 1/2(hw)]\, t$ (two ends)

$V3 = 4[1/3(w^2h)]$ (four corners)

→ Notice V3 is based on the formula for a pyramid and all the variables are as defined above.

The total volume of the truncated pyramid is $V1 + V2 + V3$.

$$\text{Total Volume} = [ht(\,t+s)]/2 + hwt + 4w^2h/3$$

AREA

The surface area of the truncated pyramid is that of the top and sides.

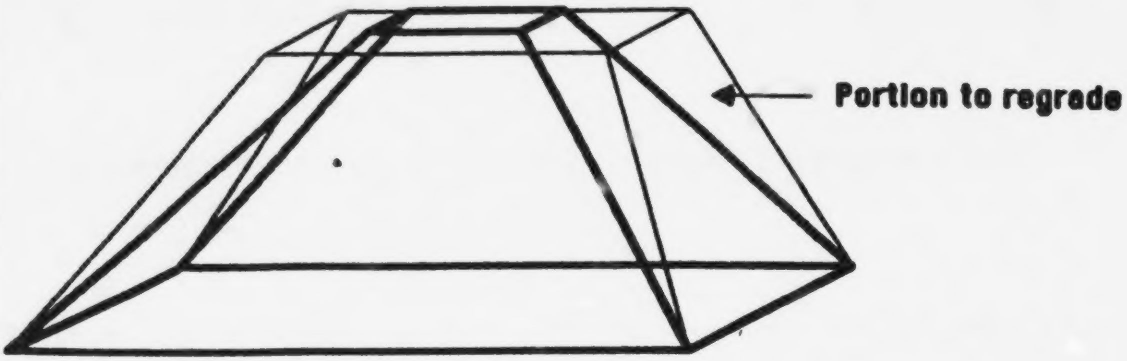
Area of Top : t^2

Area of Sides : $2h(\,s+t\,)$

$$\text{Total Area} = t^2 + 2h(\,s+t\,)$$

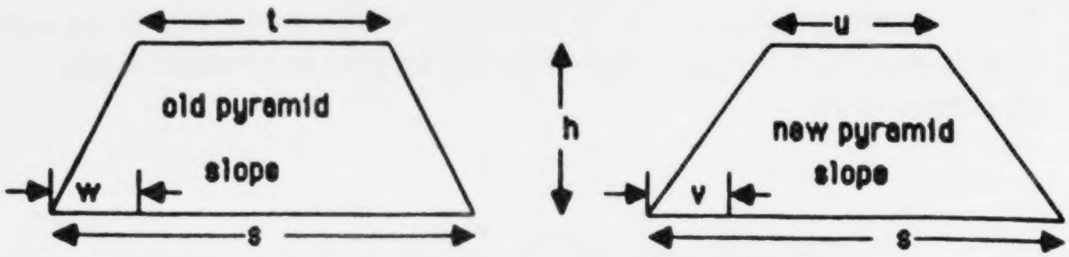
Figure B-2 (cont.)

Now, suppose the slope σ is changed and holding the length of the base side fixed, the volume of the portion to regrade can be determined, as shown below :



The volume of the portion to be regraded is determined by the difference between the volume of the new truncated pyramid and the volume of the old truncated pyramid(SCA88).

Figure B-2 (cont.)



Volume of portion to regrade = Volume old pyramid - new pyramid

$$V = \left[(ht(t+s))/2 + hwt + 4w^2h/3 \right] - \left[(hu(u+s))/2 + hut + 4v^2h/3 \right]$$

uranium mill tailings that are located at remote sites in such places as Colorado, Texas, New Mexico and Utah. However, earth is commonly purchased from off-site suppliers for source categories such as phosphogypsum waste stacks. For such operations, dirt is not available onsite.

Cost data for common borrow bought and located at the pit, hauled two miles to the site, and placed and spread with a 200 H.P. bulldozer is taken from ME88a. Compaction is not included in the cost estimate of $7.00 per cubic yard. Costs for dirt alone, loaded at the pit, can be derived from the available data by subtracting hauling and spreading costs. Hauling cost for a two-mile round trip (assuming a standard 12 cubic yard dump truck) is estimated at $2.66 per cubic yard (ME88a). Cost for fill, assuming no compaction and spreading by a bulldozer, is estimated at $1.12 per cubic yard. Thus, the cost for common borrow, bought and loaded at the pit, is estimated at $3.22 per cubic yard.

For comparison purposes, cost data from a primary source are available from Gardinier, Inc., a phosphoric acid producer (who actually purchased earth for emission control operations). Costs for two grades of earth loaded on trucks and ready to haul, taken from Gardinier Incorporated, range from $1.50 to $2.50 per cubic yard. The ME cost estimate of purchasing earth, $3.22 per cubic yard, appears to be a reasonable national average of earth loaded on trucks, at the pit. However, for large amounts of earth required in the operations considered in this analysis, this cost estimate may be too high. Economics of scale are generated when using large amounts of earth. These scale economies lower earth costs, and therefore a mean value of $2.00 per cubic yard, taken from Gardinier, Inc., is used.

B.4.2 Hauling

Hauling is required to move the earth to the pile whether the dirt is available on or offsite. In addition, excavated evaporative pond materials must be hauled to the main pile. Earth can be hauled in one of the many possible dump truck configurations when the necessary quantity of earth is not located close to the radium-bearing material to be covered. Costs of hauling are sensitive to variables such as size of equipment (generally given in cubic yards of capacity), the type of equipment (truck versus trailer and on-road versus off-road), the length of haul, and the amount of dirt transported. Hence, it is necessary that proper assumptions are made concerning the variety of variables that affect hauling costs.

Equipment size determines the quantity that can be moved per load. Labor costs, per unit of dirt hauled, decline as the size of equipment increases, but capital costs, per unit of dirt hauled, rise with increased vehicle capacity. Insofar as the change in labor costs outweighs capital costs, switching to a larger vehicle would decrease the cost of hauling.

Equipment sizes are constrained by a number of factors, including the various federal and state truck size and weight regulations. These regulations apply only to on-road vehicles and place restrictions on both the number of axles and the weight that can be placed on each axle. While additional weight can be carried by using a configuration employing additional axles, the additional axles will, at some point, require changing the mode of transportation from a single unit truck to a tractor-trailer combination.

It is important that costs reflect the capacity of the heaviest on-road single-unit truck allowed in most states, because total costs decline with the capacity of the equipment. Therefore,t he capacity of a 12-cubic-yard, single-unit truck is assumed. This assumed capacity is the sum of the empty weight (tare weight)--the average of several representative trucks with 12 cubic yards of capacity (TB88--and the weight of 12 cubic yards of dirt. The sum, a total weight of just over 50,000 pounds, approximates the federal weight limit observed inmost states (ATA87). This assumption is consistent with ME, which reports data for single-unit trucks no larger than 12 cubic yards.

The operating characteristics of the site restrict equipment size. The equipment must be able to traverse dirt and gravel access roads, and must be able to ascend semi-permanent dirt access roads to place loads ont op of the waste impoundments. These requirements will, in many cases, preclude the use of tractor-trailer combinations. Informal evidence gathered from phosphoric acid producers suggests that vehicles over 17 cubic yards of capacity are impractical for dirt cover activities.

Specialized oversize trucks that do not meet on-road specifications can be used in cases where the length of haul is long and on-road travel is not required. However, the frequency of using such equipment is limited. Moreover, the difficulties inherent in moving these trucks to other locations, when combined with their moving expense, limit the use of these trucks to situations where they can be multi-employed--that is, used for other onsite purposes in addition to the emissions control operation. For operations such as uranium mining, which are small compared to most other mining operations, the use of specialized oversize equipment is not cost-effective.

Length of haul is site-specific. However, data on hauling costs collected by ME cover distances of up to only 20 miles (round trip), indicating that either suitable material is generally available within 10 miles or that longer hauls are prohibitively expensive. Limited data on haul lengths specific to phosphogypsum operations are available from one source

(TFI88), which suggests that one-way travel distances of 2, 3, and 4 miles are the most frequent, but also that some distances could be 5 to 10 miles or more, one way. On the other hand, in the case of uranium milling operations, dirt is generally available onsite and previous analyses have suggested that a round trip haul length of only 2 miles (EPA86).

ME data on hauling costs for various truck configurations and haul lengths are presented in Table B-5. These data can be used to generate hauling costs where specific information on truck configurations, traffic conditions, and road grades and conditions is available. In the absence of specific knowledge of applicable truck configurations, it is suggested that costs reflect the cost for the 12-cubic-yard, single-unit trucks for shorter hauls (less than 5 miles round trip) and the average of costs for 12-cubic-yard trucks and 16.5-cubic-yard trailer combinations for longer hauls. While the data reported above suggest a haul length of 2 miles for uranium mills and a haul length of 10 miles round trip for phosphogypsum stacks, it is difficult or impossible to predict lengths for other situations. It is suggested that data for appropriate hauling lengths be taken from the study of local conditions.

B.4.3 EXCAVATION

Excavation requirements depend on whether dirt is available onsite, whether residual radioactive materials from evaporation ponds are moved to the main pile, or whether the prescribed method of construction future piles requires a totally or partially below grade design. Typically, earth that is excavated for cover dirt and evaporation ponds will be placed directly on trucks. Dirt excavated for new piles, however, will not be loaded on trucks but rather will be pushed aside and used at a later date as either cover material or material for the construction of dams and embankments. In general, materials that have accumulated from excavating ground for future pile storage are used to construct dams or for cover material.

Costs for different-sized equipment are given by ME88b for cases where dirt is excavated onto a truck. Costs are based on the largest excavating equipment because of the large quantities of earth involved and because of information given in EPA86, an earlier report on uranium mill tailings. Therefore, the estimated unit cost of this equipment, a 5-cubic-yard, wheel-mounted front-end loader, is $0.85 per cubic yard.

A range of costs for cased where excavated earth is not loaded onto trucks are given by ME88b. These data are provided in Table B-6. The data suggest that two major types of equipment used in excavating are dozers and scrapers. These two types of equipment are available in a number of sizes, horsepowers, and configurations. Costs for these equipment vary significantly with request to haul lengths and the type of material excavated.

Table B-5: Unit Costs for Hauling Earth
(Dollars Per Cubic Yard)

Capacity (cubic yd)	Type of Dump Truck	Length of Haul (miles round trip)[1] 0.25	0.5	1	2	3	4	5	10	20
6	Single-unit Truck	2.02	2.46	3.03	3.83	4.85	5.70			
12	Single-unit Truck	1.57	1.81	2.15	2.66	3.10	3.72	5.70	11.40	17.45
16.5	Combination Truck Trailer			1.88	2.33	2.73	3.03	4.85	6.40	9.70
20	Combination Truck Trailer			1.61	2.01	2.38	2.68	3.73	4.72	6.70
22	Off-road Dump		1.37	1.48	1.75					
34	Off-road Dump		1.22	1.33	1.55					
42	Off-road Dump		1.21	1.32	1.56					
60	Off-road Dump		1.23	1.34	1.6					
Suggested Hauling Cost[2]		1.57	1.81	2.02	2.50	2.92	3.38	5.28	8.90	13.58

[1] Add 20% for hauling in medium traffic, 30% for hauling in heavy traffic, and 100% for hauling on rough terrain or steep grades.

[2] The suggested hauling cost is equal to the unit cost for the 12-cubic-yard dump for distances under 5 miles and is equal to the average of the unit costs for the 12 and 16.6 cubic yard dump trucks for 5 miles or over.

Sources: Means Building Construction Cost Data, 1988, pp. 38-39.
Means Site Work Cost Data, 1988, pp. 35-36.

When specific information is known about the type of material excavated or the type of equipment available, specific costs can be taken from this table. When specific information is unavailable, it is suggested that data for a 21-cubic-yard scraper with 5,000 foot haul be used. These data are used in an earlier study (EPA86) and are the closest ME-reported configuration to the 32-cubic-yard scraper observed by study staff during a site visit to a uranium mill tailings pile during cover operations. The data for this configuration are also reasonably close to both the average and median costs for all excavating equipment shown in Table B-6.

B.4.4 Placing

Separate costs for placing earth covers are required in a number of instances. These costs occur where excavating or grading equipment is unable, for a number of reasons, to place dirt directly on the pile or stack. Dirt, in these circumstances, will be unloaded in one location and later put in place. This two-stage dirt placement method depends on the control technology used (for example, phased or continuous application of cover rather than a one-time operation might be used) and on the possibility that dirt is procured at a different time tan it is applied.

Placing costs, based on an estimate specific to the phosphogypsum industry (WE88), have been developed in SCA88. Taking into account the greater difficulty of working on slopes, estimate is a 2/3 average of the cost range of $1.00 to $1.90 per cubic yard. Since ME database does not recognized placing as a separate cost, the industry estimate is adopted.

B.4.5 Grading

Grading is required to shape the piles or stacks prior to cover, to grade the earth cover after it has been placed, and to spread excavated evaporative pond materials after they have been moved to the main pile. Grading is typically carried out by bulldozers or scrapers. ME85 provides several alternate configurations and haul distances for grading operations. These alternatives, which include bulldozers, towed scrapers, and self-propelled scrapers, are shown in Table B-7. All scraper configurations also include an allowance for one-quarter our bulldozer time.

While the 1988 ME data (ME88b) do not directly provide grading costs, it is possible to derive them by using crew type and daily output data from the 1985 edition (ME85), and daily equipment and crew costs from the 1988 database (ME88b). These data are presented in Table B-7.

Table B-6. Unit Costs for Bulk Excavation (Not Truck Loaded)

Type of Equipment	Length of Haul	Excavation Costs ($/cu.yd.)		
		Sand & Gravel	Common Earth	Clay
75 H.P. Dozer	50	1.29	1.48	2.38
75 H.P. Dozer	150	2.58	2.97	4.75
75 H.P. Dozer	300	4.95	5.95	9.15
105 H.P. Dozer	50	1.05	1.20	1.91
105 H.P. Dozer	150	2.37	2.72	4.32
105 H.P. Dozer	300	5.25	6.10	7.35
200 H.P. Dozer	50	0.80	0.91	1.45
200 H.P. Dozer	150	1.88	2.17	3.44
200 H.P. Dozer	300	3.61	4.14	6.60
300 H.P. Dozer	50	0.62	0.79	1.15
300 H.P. Dozer	150	1.28	1.47	2.36
300 H.P. Dozer	300	2.51	2.87	4.71
406 H.P. Dozer	50	0.76	0.87	1.39
406 H.P. Dozer	150	1.13	1.30	2.09
406 H.P. Dozer	300	2.21	2.54	4.17
700 H.P. Dozer	50	0.78	0.90	1.43
700 H.P. Dozer	150	1.36	1.57	2.50
700 H.P. Dozer	300	2.67	3.05	4.99
11 C.Y. Elevating Scraper	1500	1.70	1.96	3.13
11 C.Y. Elevating Scraper	3000	1.92	2.21	3.56
11 C.Y. Elevating Scraper	5000	2.32	2.67	4.27
14 C.Y. Self Propelled Scraper with 1/4 Push Dozer	1500	2.12	2.44	3.91
14 C.Y. Self Propelled Scraper with 1/4 Push Dozer	3000	2.43	2.79	4.44
14 C.Y. Self Propelled Scraper with 1/4 Push Dozer	5000	3.03	3.49	5.60
21 C.Y. Self Propelled Scraper with 1/4 Push Dozer	1500	1.85	2.12	3.38
21 C.Y. Self Propelled Scraper with 1/4 Push Dozer	3000	2.40	2.76	4.41
21 C.Y. Self Propelled Scraper with 1/4 Push Dozer	5000	2.91	3.76	5.40
10 C.Y. Towed Scraper with 1/4 Push Dozer	1500	2.84	3.78	5.05
10 C.Y. Towed Scraper with 1/4 Push Dozer	3000	3.53	3.97	5.30
10 C.Y. Towed Scraper with 1/4 Push Dozer	5000	4.35	5.10	7.05
15 C.Y. Towed Scraper with 1/4 Push Dozer	1500	1.99	2.65	3.53
15 C.Y. Towed Scraper with 1/4 Push Dozer	3000	2.48	2.84	3.78
15 C.Y. Towed Scraper with 1/4 Push Dozer	5000	3.06	3.61	4.96
Mean		2.30	2.70	4.06
Median		2.32	2.67	4.17
Suggested: Based on 21 C.Y. Scrapper		2.91	3.76	5.40

Source: Means Site Work Cost Data, 1988, pp. 31-33.

The type of equipment used in grading operations varies with respect to the size and type of pile and the availability of equipment. When specific information on the type of equipment used is available, the costs of the proper combination of equipment can be calculated directly from Table B-7. Information on the actual equipment used is rather sparse. On a site visit to one of the larger uranium mill tailing impoundments, a project staff member observed the use of a 32-cubic-yard scraper, which is slightly larger than the 25-cubic-yard scraper priced by ME. A previous estimated cost, for uranium mill tailings, used the 25-cubic-yard scraper with a 1,000 foot haul (EPA86). A recent report on phosphogypsum stacks (SCA88) averaged costs for the cheapest scraper (25-cubic-yard, 1,000 foot haul) and most expensive bulldozer (75 H.P.) at 2/3 of the difference to account for the greater difficulty of working on slopes. Based on the consensus that these operations use the large capacity scrapper, and that these scraper costs already include the use of 1/4 of a dozer, it is recommended that grading costs be based on this configuration. The suggested unit cost is $1.36 per cubic yard.

B.4.6 Compacting

Once an earth cover is put in place and graded, the next step of compacting. It is also assumed that dirt is compacted when excavated material from evaporative ponds are placed on the main pile. Costs for compacting have been estimated by several sources, based on data from various ME cost estimating manuals. For example, EPA86 based costs on a Terra probe, deep sand, vibrating, 30,000 cubic yard. Data for this type of equipment are given in ME as minimum and maximum costs. The minimum cost of $1.10 per cubic yard was chosen by EPA86. Another source (SCA88) averaged costs for four passes of 12-inch lift-riding vibrating rollers and 8-inch lift riding sheepsfoot rollers at 2/3 of the difference to account for the greater difficulty of working on slopes. This 2/3 average yields a cost estimate of $1.26 per cubic yard.

A compilation of costs for compacting from two of the ME manuals is given in Table B-8. Data are included for various sized os equipment and the number of passes over the surface compacted. Also included is an average of costs for each of the alternative number of passes. Since previous estimates of $1.10 and $1.26 are close to the average of $1.14 (see Table B-7), any of these estimates can be used lieu of more site-specific information on compacting equipment. A cost of $1.14 per cubic yard is suggested.

B.4.7 Earth Cover Maintenance (Arid or Semi-Arid Regions)

Methods to prevent erosion and to provide for long-term stabilization are required when a final earth cover has been put in place. In arid or semi-arid areas, when the earth cover dries, it becomes susceptible to erosion from wind, and

Table B-7. Unit Costs for Grading

Type of Equipment Used for Grading	Size of Equipment	Hauling Distance (feet)	Daily Crew Cost[1] (dollars)	Daily Crew Output[2] (cubic yard)	Cost per Unit of Output[3] ($/cubic yard)
Dozer	75 H.P.	300	593.95	160	3.71
	300 H.P.	300	1177.60	560	2.10
Towed scraper with 1/4 300 H.P. push dozer	7 C.Y.	300	1496.90	440	3.40
	7 C.Y.	1000	1496.90	200	7.48
	10 C.Y.	300	1588.65	680	2.34
	10 C.Y.	1000	1588.65	400	3.97
Self-propelled scraper with 1/4 300 H.P. push dozer	15 C.Y.	1000	1953.40	760	2.57
	15 C.Y.	2000	1953.40	560	3.49
	25 C.Y.	1000	2182.20	1600	1.36
	25 C.Y.	2000	2182.20	1280	1.70

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[1] Crew cost per day is the total cost of equipment, labor, and the contractors overhead and profit per eight-hour day.

[2] Daily crew output is the number of units the crew will install per eight-hour day.

[3] Cost per unit of output is calculated by dividing the daily crew cost by the daily crew output.

Sources: 1. Means Site Work Cost Data, 1988, pp. ix, xiii, xiv.
2. Means Building Construction Cost Data, 1985, p. 37.

occasionally, water. To control erosion a combination of gravel and rip rap is the most feasible option, since propagation of grasses or other vegetation is difficult or impossible.

Top surfaces of the pile can be protected by a gravel cap. National average costs for gravel are available from R.S. ME (ME88a). The cost of $7.55 per cubic yard is for bank run gravel, bought and loaded at the pit, hauled 2 miles round trip, and spread with a 200 H.P. dozer, assuming no compaction. The depth of gravel required will vary by location and the period required for long-term stabilization. However, a depth of one-haul yard has been previously assumed for uranium mill tailings piles (EPA86) and is a reasonable assumption for all but the most extreme cases.

While top surfaces of waste piles or stacks are protected by gravel caps, slopes provide a more serious problem for erosion control Therefore, the use of riprap for slopes is recommended. Riprap involves mechanical placing of random broken stone. The national average cost for riprap, $23 per cubic yard, is available from ME (ME88a). Again, a half-yard of depth was adopted based on previous research (EPA86).

B.4.8 Earth Cover Maintenance (Wet Regions)

For climates conductive to vegetation, it is assumed that grass seeding was used as a method of earth cover stabilization. Regular upkeep, and some form of drain system to prevent leachate materials from the stack, is needed when grass is sued. The prevention to leachate materials from the stack ensures healthy growth of grass.

Costs for seeding are available from several sources. Data for 16 types of grasses applied by each of three alternate methods are available from ME (88b). The three methods are application by push spreader, tractor spreader, and hydraulic or air seeding with mulch and fertilizer. Prices range from $10.15 per thousand square feet (approximately 1 cent per square foot) to $67.00 per thousand square feet (approximately 7 cents per square foot). Another source (WE88) gives information on seeding costs for uranium mill tailings. These costs ranged from 0.7 to 20 cents per square foot. The wide range of costs both within and between these two sources, which vary by a factor of 20, complicates the choice of a single representative cost. While any cost within this range appears justified, it is suggested that a cost of 5 cents per square foot be adopted when more site-specific information is not available. This estimate is within both ranges but toward the upper end of the ME estimates to reflect the difficult terrain of the waste stacks.

Until grass is established, and periodically thereafter, a maintenance program for the cover is required. Cracks due to surface erosion and seepage need to be refilled and reseeded.

Table B-8. Unit Costs for Compaction
(Dollars Per Cubic Yard)

Type of Compaction Equipment	Size of Equipment	Number of Passes 2	3	4
Riding, vibrating roller	6" lifts	0.25	0.33	0.49
	12" lifts	0.12	0.16	0.25
Sheepsfoot or wobbly wheel roller	6" lifts	0.31	0.42	0.63
	12" lifts	0.16	0.21	0.31
Towed sheepsfoot or wobbly wheel roller	6" lifts	0.41	0.54	0.82
	12" lifts	0.20	0.27	0.41
Vibrating roller	6" shifts	0.46	0.61	0.92
	12" shifts	0.23	0.31	0.46
Walk behind, vibrating plate 18" wide	6" lifts	0.90	1.20	1.80
	12" lifts	0.45	0.79	0.90
Vibrating roller 24" wide	6" lifts	0.99	1.32	1.98
	12" lifts	0.49	0.66	0.99
Rammer tamper, 11" x 13"	4" lifts	1.93	2.59	3.87
	8" lifts	0.97	1.29	1.93
Rammer tamper, 18" x 35"	4" lifts	0.64	0.87	1.29
	8" lifts	0.32	0.43	0.64
Terra probe, deep sand, vibrating, 30,000 C.Y.	minimum	1.10	1.10	1.10
	maximum	1.81	1.81	1.81
Average		0.65	0.83	1.14

Sources: Means Site Work Cost Data, 1988, pp. 34.
Means Construction Cost Data, 1988, pp. 29.

Grass cutting may also be required. Data for this cost are available from GA88 for phosphogypsum stacks. This source estimates that cover maintenance for a relatively large stack costs approximately $150,000 per year. This cost is adjusted downward to $130,000 per year, since a smaller model stack was used in analyzing control options at phosphogypsum stacks (SCA88). Given that the area of the model stack was 125 hectares (SCA88), conversion factors of 2.47 acres per hectare and 4840 square yards per acre are used estimate a unit cost of approximately 8.7 cents per square yard per year.

To ensure that leachate from the stack does not hamper the growth of healthy cover vegetation, some sort of drainage system may be required on (or trenched into) the surface of the stack. The type of system employed varies with respect to the thickness of the earthen cover. For covers of a half meter or less, the drainage system might consist of piping. If, however, a meter or more of cover is applied, costs to install drainage can be avoided if the initial layer of cover (about one foot) is of material sufficiently permeable to act as a drain. Note, however, that while increased permeability enhances the drainage capability of the cover, it decreases its effectiveness in mitigating radon-222 emissions.

Overall costs for a piping system are not available from the ME database or other similar sources. However, one source (SCA88) has developed costs for a hypothetical system, which is described here. The pipe drainage system is based on information from a phosphogypsum stack owner (GA88), the only source that could provide any actual information on design.

This system is composed of peripheral drains that circle the stack at approximately 10-meter vertical intervals and down-running pipes ("downspouts") that connect the peripheral drains to one another. A toe drain system is required regardless of whether or not a dirt cover is applied to the stack. Both the peripheral drains and the connecting downspout segments become smaller as the height of the stack increases because they need to carry less water the higher up the stack they are. Drains toward the bottom of the stack handle the entire stack drainage. Peripheral drains range from 8 to 12 inches in diameter, and downspouts are usually 10 to 12 inches in diameter.

For the model stack used in the phosphogypsum report (SCA88), it is assumed that the average diameter of the downspouts between segments is the same as the diameter of the peripheral drain at its top, and therefore an average diameter of 10 inches is used for both. The cost for this size of pipe is estimated at $4.05 per linear foot (GA88). To determine the cost for such a drain system, two other assumptions are made: the peripheral drains are 10 meters apart and the downspouts are spaced at an average of 30 meters apart.

The cost of $5.05 per linear foot of drainage pipe does not include installation. However, another source (ME88c), which deals with costs and installation of drain piping, suggests that installation averages 45 percent of the raw cost per meter.

The cost of the drainage system is estimated at $750,000 for the model stack. Assuming that the area of the model stack is 125 hectares (SCA88), conversion factors of 2.47 acres per hectare and 3,840 square yards per acre are used to estimate a unit cost of approximately 50 cents per square yard of surface area.

When a piped drainage system is installed, the system requires maintenance to remove clogs, assure free flow of leachate, and replace the drain segments that are displaced or crusted by settling of shifting of the pile. Again, data for these maintenance costs are available from only one source (GA88) which concerns phosphogypsum stack costs. This source estimates that about $500,000 per year is required to deal with the entire drainage system, which includes the lateral and toe drains. This cost is normalized to the size and configuration of the smaller model stack used in analyzing control options at phosphogypsum stacks (SCA88). The derived yearly cost of $175,000 is adjusted only to account for the cost of the portion of the stack drainage system required to successfully cover and vegetate the model stack (SCA88). Assuming the area of the model stack is 125 hectares (SCA88), conversion factors of 2.47 acres per hectare and 4,840 square yards per square acre are used to provide a unit cost estimate of approximately 11.7 cents per square yard per year.

B.4.9 Synthetic Covers and Liners

Another cost often incurred for uranium-bearing waste stacks is the expenditure for synthetic covers or liners. Synthetic covers are generally used in we climates where there is a requirement to reduce water infiltration into the stack. In this case, a synthetic or low-permeability clay cover is placed over the stack after it has been closed, dried, and graded, and before the earth cover is put in place. Bottom liners of clay or synthetic material are generally considered for use in new impoundments when it is necessary to prevent seepage of contaminated material into groundwater. In this case, a synthetic or low-permeability clay is placed under the site where the stack is placed.

While clay covers or liners are available as an alternative to synthetic ones, this option has not been considered, and prices for this option have not been developed.

Synthetic covers or liners are typically constructed of polyethylene or polyvinyl chloride sheets. Data are available from MB (ME88b) only for polyvinyl chloride sheets. These costs are available for three different levels of thickness and include installation. The 10 mils sheets cost $.97 per square foot, the 20 mils thick sheet cost $1.10 per square foot, and the 30 mils thick sheets cost $1.24 per square foot. Based on information form EPA86, it appears that the sheets of 30 mils thickness is appropriate for this use.

Prices for polyethylene sheets are available from only one source--SCA88. This estimate is based on data for the phosphogypsum industry (BA88, WE88, TFI88), which provides information on prices and other costs, such as installation and surface preparation. Comparing these estimates, a final price of $1.00 per square foot installed for liners of 65 mils in thickness (SCA88). Given the relatively close per unit costs of the two materials, either estimate can be used.

B.4.10 Mobilization

Mobilization costs are those associated with gathering the resources necessary to carry out a task. In most cases, the costs of mobilization are already included in the data provided in the ME manuals. For example, on manual (ME88b) notes that labor costs reflect productivity based on actual working conditions and include time spent during a normal working day on items other than actual installation such as material receiving and handling, mobilization, site movement, breaks, and cleanup. Data from this source also provide dollar figures for mobilization and demobilization of equipment, typically ranging from $200 to $300 per item for equipment such as bulldozers and scrapers. For larger pieces or equipment, allowance should be made for knockdown, assembly, as well as lead and tail vehicles for highway transport. In a special section on excavating, ME (ME88b) notes that the costs of mobilization should be added to total excavation costs. However, ME88b notes that when equipment is rented for more than three days, there is often no mobilization charge by the equipment dealer. Thus, it appears that for most situations, mobilization costs are either already included or would not be applicable.

It is interesting to note, however that one source specific to the phosphogypsum industry (GA88) estimates a one-time mobilization cost of $500,000 and a periodic mobilization cost of $7,000 to $8,000. Periodic mobilization costs are incurred when grass cover maintenance is required or when covers are placed in stages. It appears that such a large one-time mobilization cost would result in double-counting unless it is required by unusual circumstances. Unusual circumstances might include the need for mobilization on short notice, remote location of the site, lack of local availability of the required equipment, or a need to complete the project extremely quickly. On the other hand, a periodic mobilization cost in the range reported above might be considered a reasonable cost for work of short duration, when equipment dealers require compensation for moving equipment to and from the site, as suggested by the ME report (ME88b).

B.4.11 Miscellaneous Overhead Costs

While the unit cost data derived from the ME manuals include markups for material handling, overhead, and profit, some miscellaneous overhead items are not included in these figures. It is therefore recommended that total cost be multiplied by a factor to reflect these items. For a contractor, these items, according to ME (ME87b) would include:

Engineering and Design	5.0
Insurance	0.5
Permits	1.0
Bond	0.5
Total	7.0

In some cases the prime contractor will subcontract work. According to ME (ME87b), this requires additional markups for overhead, profit, and contingencies, in addition to the contractor costs discussed above. Therefore, for subcontractors, the additional markup factor will include:

Overhead & Profit	10.0
Contingency	5.0
Engineering, etc.	7.0
Total	22.0

Since it is not clear whether operations are done in-house or subcontracted, it is suggested that either the 7 percent figure or the average of the two factors (15 percent) be adopted.

B.4.12 Summary of Unit Costs

The types and unit costs, of the various activities required to provide an earthen-based control strategy are summarized in prices per yard Table B-90 and prices per meter in Table B-10. Since the required activities vary INSERT Table B-9 substantially according to the availability of on-site dirt and the type of climate, Table B-9 provides the unit costs applicable to the four combinations of these two variable.s In addition, the remaining columns of Table B-9 provide additional or alternate costs for haul lengths, new below or partially below grade impoundments, and excavation of evaporative ponds. The unit costs provided in Table B-9 represent one set of suggested unit costs based on the analyses presented above. When specific information is available about the site or the types of available equipment, the more specific unit cost data presented in earlier sections should be used.

Table B-9. Summary of Unit Costs for Earth Covers
(Dollars per square yard or cubic yard)

Unit Cost	Activity	Type of Unit	Dirt On-Site & Arid Area	Dirt Off-Site & Lush Area	Dirt On-Site & Arid Area	Dirt Off-Site & Lush Area	For Alternate Round-Trip Haul Lengths Subsitute					New Below Grade Piles	To Move Evap Ponds	To Place Dirt In Two Steps
							1	3	4	5	20			
Purchase Dirt	Procure Dirt For Cover	cu.		2.00	2.00									
Hauling[1]	Haul Excavated Dirt to Pile	cu.	2.66	8.90	8.90	2.66	2.15	3.10	3.72	5.28	13.58			
	Haul Evap Pond Material	cu.											2.66	
Excavation (on trucks)	Excavate Dirt for Cover	cu.	0.85											
	Excavate Evaporative Ponds	cu.											0.85	
Excavation	Excavate For Below Grade Pile	cu.										3.76		
Placing	Place Dirt on Pile	cu.												1.60
Grading	Regrading Slopes	cu.	1.36	1.36	1.36	1.36								
	Grading Final Covers	cu.	1.36	1.36	1.36	1.36								
	Grading Evap Pond Material	cu.											1.36	
Compacting	Compacting Dirt Covers	sq.	1.14	1.14	1.14	1.14								
	Compacting Evap Pond Material	sq.											1.14	
Gravel	Erosion Prevention	cu.	7.55		7.55									
Riprap	Erosion Prevention	cu.	23.00		23.00									
Seeding	Erosion Prevention	sq.		0.45		0.45								
Earth Cover Maintenance	Erosion Prevention	sq.		0.09		0.09								
Drain System	Erosion Prevention	sq.		0.50		0.50								
Drain System Maintenance	Erosion Prevention	sq.		0.12		0.12								
Synthetic Covers & Liners	Erosion Prevention	sq.		1.24		1.24								
	Groundwater Protection	sq.										1.24		

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[1] Assumes 2-mile round trip for on-site dirt and 10-mile round trip for off-site dirt.

Table B-10. Summary of Unit Costs for Earth Covers
(Dollars per square meter or cubic meter)

Unit Cost	Activity	Type of Unit	Dirt On-Site & Arid Area	Dirt Off-Site & Lush Area	Dirt Off-Site & Arid Area	Dirt On-Site & Lush Area	For Alternate Round-Trip Haul Lengths Subsitute 1	3	4	5	20	New Below Grade Piles	To Move Evap Ponds	To Place Dirt In Two Steps
Purchase Dirt	Procure Dirt For Cover	cu.		2.61	2.61									
Hauling[1]	Haul Excavated Dirt to Pile	cu.	3.48	11.63	11.63	3.48	2.81	4.05	4.86	6.90	17.75			
	Haul Evap Pond Material	cu.											3.48	
Excavation (on trucks)	Excavate Dirt for Cover	cu.	1.11			1.11								
	Excavate Evaporative Ponds	cu.											1.11	
Excavation	Excavate For Below Grade Pile	cu.										4.92		
Placing	Place Dirt on Pile	cu.												2.09
Grading	Regrading Slopes	cu.	1.78	1.78	1.78	1.78								
	Grading Final Covers	cu.	1.78	1.78	1.78	1.78								
	Grading Evap Pond Material	cu.											1.78	
Compacting	Compacting Dirt Covers	sq.	1.36	1.36	1.36	1.36								
	Compacting Evap Pond Material	sq.											1.36	
Gravel	Erosion Prevention	cu.	9.87		9.87									
Riprap	Erosion Prevention	cu.	30.07		30.07									
Seeding	Erosion Prevention	sq.		0.54		0.54								
Earth Cover Maintenance	Erosion Prevention	sq.		0.11		0.11								
Drain System	Erosion Prevention	sq.		0.60		0.60								
Drain System Maintenance	Erosion Prevention	sq.		0.14		0.14								
Synthetic Covers & Liners	Erosion Prevention	sq.		1.48		1.48								
	Groundwater Protection	sq.										1.48		

[1] Assumes 2-mile round trip for on-site dirt and 10-mile round trip for off-site dirt.

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